

EPCA REGULATION OF PLUMBING SUPPLIES

HEARING
BEFORE THE
SUBCOMMITTEE ON ENERGY AND POWER
OF THE
COMMITTEE ON COMMERCE
HOUSE OF REPRESENTATIVES
ONE HUNDRED SIXTH CONGRESS
FIRST SESSION
ON

H.R. 623

JULY 27, 1999

Serial No. 106-76

Printed for the use of the Committee on Commerce



U.S. GOVERNMENT PRINTING OFFICE

58-509CC

WASHINGTON : 1999

COMMITTEE ON COMMERCE

TOM BLILEY, Virginia, *Chairman*

W.J. "BILLY" TAUZIN, Louisiana	JOHN D. DINGELL, Michigan
MICHAEL G. OXLEY, Ohio	HENRY A. WAXMAN, California
MICHAEL BILIRAKIS, Florida	EDWARD J. MARKEY, Massachusetts
JOE BARTON, Texas	RALPH M. HALL, Texas
FRED UPTON, Michigan	RICK BOUCHER, Virginia
CLIFF STEARNS, Florida	EDOLPHUS TOWNS, New York
PAUL E. GILLMOR, Ohio	FRANK PALLONE, Jr., New Jersey
<i>Vice Chairman</i>	SHERROD BROWN, Ohio
JAMES C. GREENWOOD, Pennsylvania	BART GORDON, Tennessee
CHRISTOPHER COX, California	PETER DEUTSCH, Florida
NATHAN DEAL, Georgia	BOBBY L. RUSH, Illinois
STEVE LARGENT, Oklahoma	ANNA G. ESHOO, California
RICHARD BURR, North Carolina	RON KLINK, Pennsylvania
BRIAN P. BILBRAY, California	BART STUPAK, Michigan
ED WHITFIELD, Kentucky	ELIOT L. ENGEL, New York
GREG GANSKE, Iowa	THOMAS C. SAWYER, Ohio
CHARLIE NORWOOD, Georgia	ALBERT R. WYNN, Maryland
TOM A. COBURN, Oklahoma	GENE GREEN, Texas
RICK LAZIO, New York	KAREN MCCARTHY, Missouri
BARBARA CUBIN, Wyoming	TED STRICKLAND, Ohio
JAMES E. ROGAN, California	DIANA DEGETTE, Colorado
JOHN SHIMKUS, Illinois	THOMAS M. BARRETT, Wisconsin
	BILL LUTHER, Minnesota
	LOIS CAPPS, California

JAMES E. DERDERIAN, *Chief of Staff*

JAMES D. BARNETTE, *General Counsel*

REID P.F. STUNTZ, *Minority Staff Director and Chief Counsel*

SUBCOMMITTEE ON ENERGY AND POWER

JOE BARTON, Texas, *Chairman*

MICHAEL BILIRAKIS, Florida	RALPH M. HALL, Texas
CLIFF STEARNS, Florida	KAREN MCCARTHY, Missouri
<i>Vice Chairman</i>	THOMAS C. SAWYER, Ohio
STEVE LARGENT, Oklahoma	EDWARD J. MARKEY, Massachusetts
RICHARD BURR, North Carolina	RICK BOUCHER, Virginia
ED WHITFIELD, Kentucky	FRANK PALLONE, Jr., New Jersey
CHARLIE NORWOOD, Georgia	SHERROD BROWN, Ohio
TOM A. COBURN, Oklahoma	BART GORDON, Tennessee
JAMES E. ROGAN, California	BOBBY L. RUSH, Illinois
JOHN SHIMKUS, Illinois	ALBERT R. WYNN, Maryland
HEATHER WILSON, New Mexico	TED STRICKLAND, Ohio
JOHN B. SHADEGG, Arizona	PETER DEUTSCH, Florida
CHARLES W. "CHIP" PICKERING, Mississippi	RON KLINK, Pennsylvania
VITO FOSSELLA, New York	JOHN D. DINGELL, Michigan,
ED BRYANT, Tennessee	(Ex Officio)
ROBERT L. EHRLICH, Jr., Maryland	
TOM BLILEY, Virginia,	
(Ex Officio)	

(II)

CONTENTS

	Page
Testimony of:	
Goike, David, Masco Corporation, representing Plumbing Manufacturers Institute	137
Haege, Glenn, talk show host, WXYT	24
Knollenberg, Hon. Joe, a Representative in Congress from the State of Michigan	9
Kosmensky, Gerald, President, Gerald Building Company	27
Lieberman, Ben, Policy Analyst, Competitive Enterprise Institute, representing the National Consumer Coalition	19
Osann, Edward R., President, Potomac Resources, Inc	50
Taylor, Jerome, Director of Natural Resource Studies, Cato Institute	30
Tippin, David L., Director, Tampa Water Department	44
Whalen, George V., National Association of Plumbing, Heating, Cooling Contractors	54
Willardson, Anthony, Associate Director, Western States Water Council ...	143
Material submitted for the record by:	
American Society of Plumbing Engineers, prepared statement of	157
CTSI Corporation, prepared statement of	163
Williams, Harold, Jr., prepared statement on behalf of The American Supply Association	161

EPCA REGULATION OF PLUMBING SUPPLIES

TUESDAY, JULY 27, 1999

HOUSE OF REPRESENTATIVES,
COMMITTEE ON COMMERCE,
SUBCOMMITTEE ON ENERGY AND POWER,
Washington, DC.

The subcommittee met, pursuant to notice, at 2 p.m., in room 2322, Rayburn House Office Building, Hon. Joe Barton (chairman) presiding.

Members present: Representatives Barton, Bilirakis, Burr, Whitfield, Norwood, Shimkus, Bryant, Hall, Sawyer, Rush, and Dingell (ex officio).

Also present: Representative Bilbray.

Staff present: Amit Sachdev, majority counsel; and Rick Kessler, minority professional staff member.

Mr. BARTON. The subcommittee will come to order. We are going to hold today a hearing on H.R. 623, introduced by Congressman Knollenberg of Michigan, a bill to amend the Energy Policy and Conservation Act to eliminate certain regulation of plumbing supplies.

This is bipartisan legislation. It has 82 cosponsors, including myself, and as I said, it has been introduced by the gentleman before the subcommittee, Mr. Knollenberg of Michigan. As a part of the Energy Policy Act of 1992, Congress created national uniform standards regulating the amount of water that could be used by faucets, showerheads and water closets. For faucets and showerheads, Congress set the maximum flow rate at 2.5 gallons per minute, for water closets, which most people know as toilets, Congress mandated that only 1.6 gallons per flush could be used. Today we will hear testimony on H.R. 623 to consider whether to repeal these national water standards, thereby reverting back to State and local government control to establish such water standards as they feel are appropriate for their regional needs.

This is an issue that is easy to make light of, obviously, because of the subject matter, but it is important that we take this legislation seriously. I am a cosponsor and I want to make it perfectly clear that I support the need to conserve and not waste the precious water resources of our Nation. In my view the issue before us today is not whether to encourage water conservation in the United States, but how best to do so.

Why should this legislation be taken up now. The reason is fairly simple and straightforward. In hundreds of strongly worded letters, e-mails and telephone calls, the public has asked that this issue be revisited. As many of my colleagues can attest, since passage we

have heard quite literally and vocally in our town meetings and in our districts that consumers are not satisfied with the performance of these new appliances. We have heard many accounts that the low flow appliances simply do not work. They do not perform adequately.

These concerns have been raised by news programs on television and radio and in newspapers across the country. The principal task before us today is to determine whether the national one size fits all standard set in Congress in 1992 is the most effective way to achieve water conservation in the United States. Has the Federal standard one size fits all artificially constrained the marketplace for water conservation products? Is this an issue that is better addressed at the regional level where State and local governments will better account for regional water supply and demand? Finally, is there a win/win scenario to address the problems that we have heard, one that ensures a true marketplace for affordable plumbing appliances that perform better and still meet the country's water conservation needs?

We have assembled an esteemed group of experts on both sides of the issue to address this problem. We are going to start by hearing from the Congressman who has introduced the legislation, the gentleman from Michigan, Mr. Knollenberg. And once he has spoken, then we will have two panels of experts, again one panel that supports the legislation generally and one panel that has questions about it. Seeing no member of the minority party yet in attendance, we will recognize Mr. Bilirakis, distinguished member of the Health and Environment Subcommittee and a gentleman who helped pass the act back in 1992, for an opening statement. Mr. Bilirakis.

Mr. BILIRAKIS. Mr. Norwood was here before me.

Mr. BARTON. Well, you are senior and you have been a leader on this issue.

Mr. BILIRAKIS. First, I would like to thank you, Mr. Chairman, for scheduling this hearing at a time I could participate. I would also like to take a moment to welcome David Tippin, the Director of the Tampa Water Department, here to Washington.

The topic of today's hearing, Mr. Chairman, as you have indicated is legislation that proposes to repeal Federal water conservation standards enacted as part of the Energy Policy and Conservation Act of 1992 for certain plumbing appliances.

As a representative from a State where water conservation is an important issue, I strongly oppose this legislation. Most of us take water for granted and we assume that we can simply turn on the tap or a garden hose and there will be a steady stream of cheap clean water, but in many States and localities there is much more to it than that. In my home State of Florida, water conservation has become a way of life. Residents routinely experience drought conditions, water audits, state-of-the-art leak detection methods, lawn sprinkling bans and other measures are frequent reminders of the severity of my State's water shortfalls.

The drought now effecting several portions of the United States also serves to underscore the need to make more efficient use of our water supplies. Even where water is not scarce, new water efficient plumbing products help consumers and communities hold

down the rising costs of additional water supply and waste water treatment infrastructure. These costs are especially relevant in a climate where residential monthly water and sewage charges rose by 75 percent between 1986 and 1996 for those using 1000 cubic feet of water.

Americans now spend about \$50 billion each year on residential water and sewer bills. We spend an additional \$16 billion on the cost of the energy needed to heat domestic hot water. New capital improvements will play a major role in driving water and waste water costs up in the future. Data published by the Environmental Protection Agency in 1997 shows that the public water systems and waste water treatment agencies will need to invest approximately \$280 billion to protect public health and to accommodate growth over the next 20 years. A significant portion of this investment, over \$200 billion, will be for facilities and equipment.

In a typical single family home 80 percent of all indoor water use is devoted to flushing toilets, taking showers, washing clothes and allowing fixtures to leak. Without changing our life-style, the volume of water committed to each of these uses can be substantially reduced with the water efficient plumbing appliances required by this, by EPAct. Out of all of these fixtures, the 1.6 gallon flush toilet has received the most attention. This is due in part to a number of poor performing toilets being placed in the market in the early 1990's. Since the mid-1990's, my understanding is that manufacturers have provided toilets which work well and meet all national testing standards. Reports ranging from Consumer Reports magazine to post-installation studies by utilities promoting major toilet rebate and replacement programs show a significant degree of satisfaction with the new fixtures.

For example, 90 percent of San Diego, California customers who participated in a toilet rebate program were satisfied with their new 1.6 gallon per flush toilets. In Austin, Texas, 95 percent of users were satisfied or very satisfied with the 1.6 gallon per flush toilets. And 91 percent of Tampa, Florida consumers were likely to purchase another 1.6 gallon per flush toilet in the future.

How significant are the savings from water efficient appliances? Water conserving fixtures used in houses built in 1998 save 44 million gallons of water every day, totaling a savings of more than \$33.6 million a year. All told, water conserving fixtures could cut demand by 30 percent, an estimated 5.4 billion gallons per day. Moreover, the energy savings resulting from using hot water more efficiently with new showerheads and faucets is expected to reach \$1.9 billion per year by 2010 for the residential sector alone.

The positive impact of water conservation can be dramatic. The population of Los Angeles has risen by nearly 1 million since 1970, an increase of 32 percent. Yet residential and business customers last year used virtually the same amount of water as they used 29 years ago. How is this possible? By low flow toilets saving the city 9 billion gallons of water each year.

In 1997 Tampa bay water completed its regional demand management plan. This plan estimated that by the year 2000, approximately 5.25 million gallons per day will be saved by EPAct's water conserving plumbing fixture requirements. The plan estimates the

savings will increase to 15.5 million gallons per day by 2010 and to over 20 million gallons per day by 2015.

When the House of Representatives debated EPA's Act, it overwhelmingly approved uniform national efficiency standards for faucets, water closets, urinals and showerheads to conserve both energy and water by a vote of 328 to 79, and I repeat 328 to 79.

H.R. 623 would repeal these uniform national standards, the very standards that are broadly supported by manufacturers, plumbing contractors and wholesalers, water and waste water utilities, and environmental organizations. If enacted, this measure would increase the burden on States and communities seeking to enforce our water efficiency standards, and it would also force U.S. Manufacturers to commit time and money designing products for differing flush volumes, flow rates, test procedures and labeling requirements, all of which could vary by State and local jurisdiction if uniform national standards are repealed.

Plumbing suppliers and wholesalers are primarily small independent businesses who are in the unique position of owning their inventory. Enactment of H.R. 623 could render portions of this stock obsolete and unmarketable which could have a devastating impact on these small businesses. H.R. 623 injects a measure of uncertainty into the planning for billions of dollars of water supply and waste water treatment infrastructure nationwide.

Water efficiency, as you said right at the outset, Mr. Chairman, is no joke. A consistent and stable regulatory environment as provided by current law is a critical ingredient for new investment competition and product development in the plumbing industry. Water conservation is the easiest and most cost effective strategy we can use to combat present and projected water supply shortfalls, and repealing the 1992 conservation standards is in my strong opinion bad policy.

Mr. Chairman, thank you very much. I look forward to hearing from our witnesses, and I appreciate your indulgence. Thank you.

Mr. BARTON. Thank you, Congressman Bilirakis. We will put you down as undecided on this legislation.

The gentleman from Georgia, Mr. Norwood, is now recognized for an opening statement.

Mr. NORWOOD. Thank you very much, Mr. Chairman, and thank you very much for holding this hearing which on the face of it tends to make it grin, but it is truly a serious matter. My State of Georgia is surrounded by water. We are surrounded by rivers except on our north end, and water conservation is extremely important to us. We take that very seriously. On the other hand, I am a very proud cosponsor of Mr. Knollenberg's bill and hope that we can reverse the 1992 water conservation standards, at least on the Federal level, as soon as possible.

At home I am in difficulty with my sons, both of whom are building houses and they are old enough to be men, and I have to sit there and plead with them please don't go to the black market. That doesn't play very well in the 10th District if my sons were to do that. However, they are not satisfied with the 1.6 gallon flushers that don't work. We do need to conserve water, but we don't have a vehicle that does that. When you turn around and flush that same toilet twice, you really haven't saved a lot.

I find myself in an interesting position in that I am renovating a building which has a great number of 20-year-old toilets that I am told by the local inspector, he doesn't blame it on the Georgia law, he blames it on the Federal law, that I have to rip them all out and put in new units. Well, I can catch on why some folks who make toilets might think that is a good idea. That doesn't go over my head at all.

But interestingly enough in my district the plumbing contractors and suppliers are very much against the 1992 water conservation standard. They didn't feel like people in Washington, DC. In their normal effort to have one size fits all really need to tell them exactly how they want to do that.

So I applaud Mr. Knollenberg and look forward to this hearing today, and I hope we will all take this as a very serious matter because I certainly do. Thank you, Mr. Chairman.

Mr. BARTON. Thank you Congressman Norwood. We would now like to recognize the distinguished ranking member of the full committee, Mr. Dingell, for an opening statement.

Mr. DINGELL. Mr. Chairman, I thank you for your kindness and recognition. I want to welcome my dear friend, Mr. Knollenberg. He is a valuable member of the Michigan delegation. He and I work together on many things that are important to our State. He is wisely and properly respected and I am happy to see him here. I would observe that I do have an opening statement which I would ask unanimous consent to put in the record.

Mr. BARTON. Without objection.

Mr. DINGELL. My good friend from Michigan and I do not agree on this legislation, and I would just make the observation that despite the concerns that have been expressed outside this committee, water consumption has dropped at the same time the population has significantly increased. A lot of this is due to reduction in interior residential water use and most of this has been as a result of the 1.6 gallon per flush toilets.

Water pollution is a growing problem in this country. We are not addressing it because we are not putting money into the construction of waste water treatment works and sewer construction. This is having a terrible impact on waters in areas that are served by my good friend from Michigan and I. The result of this is that we are now seeing terrible pressure on the communities that he and I serve to spend enormous sums of money to clean up waters, rivers that he and I are well familiar with. The Huron, the Clinton, the Rouge, and the Raisin in southeast Michigan are all being afflicted with terrible problems of pollution.

And with the figures that I am getting on satisfaction, for example in Denver, the satisfaction was 87 percent. 9 percent of the people registered an unhappy experience. Obviously we are going to have to perfect these kinds of toilets, but hopefully these kinds of toilets do offer us a chance, until the replacement of the old ones has been completed, of significantly bettering not only our water use but reducing the amount of money that the country has to spend on waste treatment.

And I would note that in 1992 when this legislation was passed out of this committee which established the standards, it was as a result of an unusual coalition: industry, environmentalists, small

businesses and the States. Those provisions passed the House 328 to 79 and they were viewed widely as being useful, necessary and good, and I believe the result—a reduction in needs for waste treatment, water savings, a saving of taxpayer dollars—has been very, very good.

I say these things with respect for my friend. He is a very fine person and a valuable member of the delegation and a great public servant. I am sorry we differ, but we will try and do so with respect and affection. But I do want him to know that I am going to do the best that I can to beat this legislation.

Mr. BARTON. Well, that is two undecideds. The gentleman from North Carolina, Mr. Burr, is recognized for a brief opening statement.

Mr. BURR. I thank you, Mr. Chairman. I welcome my good friend and former neighbor in the Longworth Building, Mr. Knollenberg, as well as our other panelists who are here to testify today about plumbing standards enacted by the Energy Policy Act.

Mr. BARTON. Are you reading off of what I think you are reading off of?

Mr. BURR. Would the gentleman like some time?

Mr. BARTON. I am just observing what you are reading off of.

Mr. BURR. Mr. Chairman, the 1992 Energy Act enacted burdensome and frivolous regulations on the sizes of toilets and showerheads. Specifically new toilets manufactured in the United States can only use 1.6 gallons per flush. And showerheads are permitted to use only 2.5 gallons per minute. Of course the average American might take these regulations as another urban myth, much like the baby alligator who was flushed down the toilet into the sewer and grew to terrorize the city's water works. Of course under the 1992 EPA Act, that alligator probably couldn't have been flushed on the first or the second or the third try in a low flow, 1.6 gallon per flush toilet. It would have taken 2 or 3 flushes.

Seriously, these regulations have cost home owners and home builders adding as much as \$200 to the cost of installing a new toilet in the home. These regulations also strain the relationship between homeowner and home builder. As we will hear later, home builders often receive complaints about the operation of their toilets. When the contractor responds that the faulty toilet is the result of a mandate from Washington, the homeowner blames the contractor for making excuses for poor professionalism.

These numbers are backed up by the fact that in 1998 the National Association of Home Builders survey found that 72 percent of home builders consider the 1.6 gallon toilet to be a problem.

It should be noted, Mr. Chairman, that the NAHB has recently taken a neutral stance on my colleague Mr. Knollenberg's legislation. Also, how is the goal of water conservation achieved when a toilet must be flushed more than once to remove waste or a person has to take a 10-minute shower instead of a 5-minute shower because of the weak water pressure produced from a low-volume showerhead.

H.R. 623, Mr. Chairman, does not impose any new mandates or any new Federal regulations on plumbing manufacturers who currently oppose this bill. This bill does not outlaw low flush toilets or low volume water heads. In fact I am a little confused as to why

those manufacturers don't want to put the best product that they can make on the market.

Mr. Chairman, I used to joke with my colleagues about the legislation that he proposed when his office was located next door to mine until I made a trip to Wilmington, North Carolina. After a long day of work, I returned to my hotel hoping to relax from a day of discussing real problems that Congress should be dealing with. I made my way to the hotel bathroom only to find a sign next to the toilet stating that because of Federal regulations limiting the size of the toilet, it was necessary for me to flush at least twice. If that was unsuccessful, to call the front desk.

I felt personally offended by the idea that the Federal Government feels it has the right to regulate how many times I am required to flush.

Mr. Chairman, if we allow these regulations to stay in place, we in effect put our stamp of approval on an intrusive and burdensome Federal Government. If States and localities are responsible for zoning laws and building codes, I think it is time we return the right of choosing the size of toilet and of showerheads back to the governments as well.

Again, I want to thank you, Mr. Chairman, for your insight to hold these hearings and welcome my dear friend Congressman Flush and thank him for H.R. 623, and with that I yield back the balance of my time.

Mr. BARTON. We will not put the gentleman's statement in its current configuration in the record. He will have to conform to normal standards of statements in terms of what is put in the record. We appreciate—

Mr. BURR. Mr. Chairman, in a quick calculation that I have made with the 1.6 gallon toilet, this last Friday, I believe, the Vice President with his trip down the Connecticut River cost us 6 billion flushes.

Mr. BARTON. Who stayed up all night making that calculation?

Mr. BURR. Mr. Norwood and I between the powers of North Carolina and Georgia came up with that calculation.

Mr. BARTON. I see.

Mr. BURR. I thank the chairman.

Mr. BARTON. The gentleman from Texas, the distinguished ranking member of the subcommittee, Mr. Hall, is recognized for an opening statement.

Mr. HALL. Mr. Chairman, I don't really have an opening statement, but I am sure interested in this bill. I think I ran into Joe on the floor last year when he introduced it and he was so persuasive that I immediately signed on.

When I got back to my district I found out that one of the major manufacturers gives X number of people jobs in my district and they were very opposed to this common sense pro consumer legislation. And while I have not signed on this year, I was just thinking in the Congressman's presentation, I didn't get to hear it but I have read it, it says, "In fact, the situation has gotten so bad that many individuals are traveling out of the country just to pick up a toilet that works. This is a common occurrence at the Detroit-Canadian border," and I was just think how if my wife called here

and they said Ralph is out looking for a potty that works, I don't know but what she would believe it.

It is a pretty common sense bill, and I am going to take another look at maybe coming on it. I don't think that we have any business telling them—invading their private areas as much as they are with this kind of legislation.

And the gentleman mentioned alligators. I remember an old story about they sent one of the waiters out to the spring to get a bucket of water on one of the hunting mesas, and he pulled up the bucket and he saw an alligator, and he came running back in. He said there was an alligator out there. They said did you bring the water? He said, yeah, but if that alligator is as scared as I am, that water ain't fit to drink.

Mr. BARTON. We really appreciate that story.

Mr. HALL. You can erase that one with one of those Nixon erasers. I yield back the balance of my time.

Mr. BARTON. The gentleman from Tennessee, Mr. Bryant, is recognized for an opening statement.

Mr. BRYANT. Thank you, Mr. Chairman. I thank you for having this hearing and Mr. Knollenberg, a good friend from Michigan. I thank him for his bill. So far from what I have heard, we have said all that we can say from this end. I know there are some other folks that have some additional things to make in their statements. I am not going to add any more to the level of this debate so far, but I am looking forward eagerly to hearing from Congressman Knollenberg and the others on the following panels who have first-hand knowledge in many cases and can tell us the pluses and the minuses of this legislation. I look forward to hearing this and I yield back the balance of my time.

Mr. BARTON. The gentleman from Illinois, Mr. Rush, is recognized for an opening statement.

Mr. RUSH. Thank you, Mr. Chairman. I want to commend you for this hearing, and I want to commend the author of H.R. 623 for this bill. We are here today to look at an issue that quite honestly has two viable sides. Certainly there are complaints regarding how the current water flow standards effect the quality of living. On the other hand, the benefits of the current standards cannot be denied. A savings of 44 million gallons of water a day with a dollar savings of \$33.6 million a year. Let us make no mistake, water is a resource, which means, at times, if not all the time, it can be scarce.

We as Members of Congress have a duty to provide standards which encourage conservation. Having said that, Mr. Chairman, the means we apply to achieve conservation should not, if not necessary, be so overburdensome that the conservation regulations totally handicap water usage.

I look forward to this afternoon's discussion on this issue. I hope that we can find a solution which conserves water and provides consumers with effective water usage. What I do not recommend is that we simply toss out effective conservation regulation without being sure of the effect of any replacement.

Thank you, Mr. Chairman. I yield back the balance of my time.

Mr. BARTON. Thank you, Congressman Rush. The gentleman from the great State of Kentucky, Mr. Whitfield, is recognized for an opening statement.

Mr. WHITFIELD. Thank you, Mr. Chairman. I am glad to see you, Mr. Knollenberg, and I really appreciate your bringing this issue to our attention. I look forward to your testimony. I yield back the balance of my time.

Mr. BARTON. The gentleman from Ohio, Mr. Sawyer, is recognized for an opening statement.

Mr. SAWYER. Let me say thank you to you and to Mr. Knollenberg for his tenacity and to Mr. Rush for his carefully stated words. [Additional statement submitted for the record follows:]

PREPARED STATEMENT OF HON. TOM BLILEY, CHAIRMAN, COMMITTEE ON COMMERCE

Thank you, Mr. Chairman. This afternoon, we are here for a Subcommittee hearing on H.R. 623, legislation to amend the Energy Policy Act of 1992 to repeal the national uniform standards for certain types of plumbing appliances, including showerheads and water closets.

In 1992, Congress set the maximum flow rate at 2.5 gallons per minute for faucets and showerheads and at 1.6 gallons per flush for water closets.

I strongly support the need to conserve, and not waste, the precious water resources available in our country. The issue before the Subcommittee today is whether it is more appropriate to establish water standards for plumbing appliances using a uniform federal standard, or whether it makes more sense to allow state and local governments to establish standards that are tailored to their regional needs.

Since passage of the Energy Policy Act of 1992, we have heard from consumers and groups urging us to revisit this issue. In doing so today, I hope our invited experts can offer insights that will ensure a winning solution that provides affordable and effective plumbing appliances that meet this Country's water conservation goals.

I look forward to the testimony of our esteemed witnesses.

Mr. BARTON. The gentleman from Michigan, the sponsor of the bill, is recognized for such time as you may consume. I understand you also have a short video. We are not going to put the clock on you, Congressman, but we hope that you manage your time well.

STATEMENT OF HON. JOE KNOLLENBERG, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. KNOLLENBERG. Thank you, Mr. Chairman.

I am very appreciative of the comment and opening statements, et cetera. I think you have all done a good job in presenting both sides of this issue and I am delighted to have the opportunity now to address you with some thoughts that pertain to H.R. 623, the Plumbing Standards Improvement Act of 1999. As you know, Mr. Chairman, back in 1992 the 102d Congress and President Bush enacted amendments to the Energy Policy Act. Tucked inside this large bill was a little-noticed provision that vastly expanded the reach of the Federal Government by imposing new, overreaching mandates on plumbing products manufactured in the United States.

Specifically, under this new law the Federal Government now regulates the flow of water in American toilets and showerheads. Since 1994, new toilets manufactured in the United States can only use 1.6 gallons of water per flush and showerheads are permitted to use only 2.5 gallons of water per minute.

Under the guise of improving the Nation's energy policy and conserving water, these burdensome regulations have created an unnecessary headache for the American people who have been saddled with toilets and showers that in many cases do not work properly.

In the view of millions of American consumers, the Federal Government has no business engaging in this type of unnecessary and counterproductive regulation. Therefore, in the 105th Congress I first introduced legislation to repeal these ridiculous mandates. Since that time, my office has received not hundreds but thousands of phone calls, letters and e-mails from disgruntled consumers who are angry that their new toilets repeatedly clog, require multiple flushing, and do not save water.

Their message is clear and straightforward. Get the Federal Government out of my bathroom.

At this time, I request the committee's permission to show a segment from the ABC news program 20/20. I believe that this footage clearly outlines the issues at hand and offers testimonials from several Americans who are unhappy with the quality of the 1.6 gallon toilets.

Mr. BARTON. If we can turn the monitor so that the audience has a fighting chance to see it in addition to the members. People on this side may have to move over temporarily.

[Videotape shown.]

Mr. KNOLLENBERG. Mr. Chairman, I appreciate your indulgence and the committee's indulgence to hear that short tape. I think that this tape makes a very compelling case that there is no legitimate reason for the Federal Government to be in the business of regulating the American people's toilets.

There are many challenges that face this Nation, such as securing the future of Social Security, cutting taxes for working Americans, improving the quality of our schools, et cetera. Clearly, the Federal Government has more important things to do than regulating the amount of water used to flush a toilet.

This regulation offers a vivid example of why the American people believe the Federal Government is too large and too intrusive. H.R. 623 responds to these concerns. This bill does not impose any new mandates on plumbing manufacturers. I repeat, this bill does not impose any new mandates on plumbing manufacturers. It provides them with the opportunity to make a product the American people will want to buy.

Strangely enough, the Plumbing Manufacturers Institute has led the opposition to this common sense pro consumer legislation, and I am still perplexed by their opposition.

In conversations with representatives from the industry, I have been told that the 1.6 gallon toilets work and consumers are happy with them.

This is contrary to the messages I have received from angry individuals from every region of the country. But for the sake of argument, let's concede their point. This raises a very interesting question. Given the fact that my bill simply ends the Federal Government's regulation of toilets and does not require the plumbing manufacturers to meet any new Federal requirements, why are they so worried? If the 1.6 gallon toilets work, consumers will buy them and the plumbing manufacturers will continue to make money. And, if States and localities believe that regulation of this type is vital to their well-being, H.R. 623 does nothing to prevent them from adopting these kinds of standards at the State and local level.

In reality, consumers are not happy with the performance of the 1.6 gallons toilets, and the plumbing manufacturers know that if the Federal standard is eliminated, someone will enter the market and produce a product that consumers want to buy at a reasonable price.

This is not something for the narrow special interests to be afraid of. It is called capitalism, and it has served the American people well for over 200 years.

Mr. Chairman, while there is no question that this issue registers on the giggle meter, it is no laughing matter, particularly not for the individuals who have been forced by politicians in Washington to use inferior products. Make no mistake, the American people are upset, and they are demanding that Congress do something about this egregious intrusion of the Federal Government into their daily lives. In fact, the situation has gotten so bad that many individuals are traveling out of the country just to pick up a toilet that works. As has been noted, this is a common occurrence at the Detroit-Canadian border.

Clearly the time has come for Washington to get out of American people's bathrooms. It is time for us to correct this overzealous Federal regulation. It is time to get back to some common sense. It is time for this Congress to say to the American people, we understand the difference between appropriate regulation and just plain bad regulation. This is bad regulation and it needs to be repealed now.

I want to thank the chairman and the members of this committee for your indulgence. I look forward to working with you to resolve this problem once and for all. Again, I would be happy to respond to any questions.

[The prepared statement of Hon. Joe Knollenberg follows:]

PREPARED STATEMENT OF HON. JOE KNOLLENBERG, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF MICHIGAN

Chairman Barton, members of the Subcommittee on Energy and Power, I want to thank you for holding this important hearing on H.R. 623, the Plumbing Standards Improvement Act of 1999.

Mr. Chairman, in 1992, the 102nd Congress and President Bush enacted the Energy and Policy Act. Tucked inside this large bill was a little noticed provision that vastly expanded the reach of the federal government by imposing new, overreaching mandates on plumbing products manufactured in the United States.

Specifically, under this new law, the federal government now regulates the flow of water in American toilets and showerheads. Specifically, new toilets manufactured in the United States can only use 1.6 gallons of water per flush, and showerheads are permitted to use only 2.5 gallons of water per minute.

Under the guise of improving the nation's energy policy and conserving water, these burdensome regulations have created a unnecessary headache for the American people who have been saddled with toilets and showers that in many cases do not work properly.

In the view of millions of American consumers, the federal government has no business engaging in this type of unnecessary and counterproductive regulation. Therefore, in the 105th Congress, I first introduced legislation to repeal these ridiculous mandates. Since that time, my office has received thousands of phone calls, letters, and e-mails from disgruntled consumers who are angry that their new toilets repeatedly clog, require multiple flushing, and do not save water.

Their message is clear and straightforward: Get the federal government out of my bathroom.

At this time, I request the committee's permission to show a segment from the ABC News' program, 20-20. This footage clearly outlines the issues at hand and offers testimonials from several Americans who are unhappy with the quality of the 1.6 gallon toilets.

Thank you Mr. Chairman for your indulgence.

Ladies and gentlemen on the committee, this tape makes a compelling case that there is no legitimate reason for the federal government to be in the business of regulating the American people's toilets.

There are many challenges that face our nation, i.e. securing the future of Social Security, cutting taxes for working Americans, improving the quality of our schools, etc.

Clearly, the federal government has more important things to do than regulating the amount of water used to flush a toilet.

This regulation offers a vivid example of why the American people believe their federal government is too large and too intrusive. H.R. 623 responds to these concerns. This bill does not impose any new mandates on plumbing manufacturers. It simply provides them with the opportunity to make a product that the American people will want to buy.

Strangely enough, the Plumbing Manufacturers Institute has led the opposition to this common-sense, pro-consumer legislation, and I am still perplexed by their opposition.

In conversations with representatives from the industry, I have been told that the 1.6 gallon toilets work and that consumers are happy with them.

This is contrary to the messages I have received from angry individuals from every region of the country, but for the sake of argument, let's concede their point.

This raises an interesting question: Given the fact that my bill simply ends the federal government's regulation of toilets and does not require the plumbing manufacturers to meet any new federal requirements, why are they so worried?

If the 1.6 gallon toilets work, consumers will buy them, and the plumbing manufacturers will continue to make money. And, if states and localities believe that regulation of this type is vital to their well-being, H.R. 623 does nothing to prevent them from adopting these kinds of standards at the state and local level.

In reality, consumers are not happy with the performance of the 1.6 gallon toilets, and the plumbing manufacturers know that if the federal standard is eliminated someone will enter the market and produce a product that consumers want to buy at a reasonable price.

This is not something to for the narrow, special interests to be afraid of. It's capitalism, and it has served the American people well for over two hundred years.

Mr. Chairman, while there is no question that this issue registers on the giggle meter, it's no laughing matter for the individuals who have been forced by politicians in Washington to use an inferior product.

Make no mistake, the American people are upset, and they are demanding that Congress do something about this egregious intrusion of the federal government into their daily lives.

In fact, the situation has gotten so bad that many individuals are traveling out of the country just to pick up a toilet that works. This is a common occurrence at the Detroit/Canadian border.

Clearly, the time has come for Washington to get out of the American people's bathrooms. It's time for us to correct this overzealous federal regulation. It's time to get back to a little common sense.

And it's time for this Congress to say to the American people, we understand the difference between appropriate regulation and just plain bad regulation. This is bad regulation, and it needs to be repealed now.

I want to thank the members of the committee for your consideration of this issue, and I look forward to working with you to resolve this problem once and for all.

Mr. BARTON. Is that your opening statement?

Mr. KNOLLENBERG. That is. In fact, if I can submit for the record some additional materials, but that is the statement.

Mr. BARTON. The Chair is going to recognize himself for the first 5 minutes. If we have a speedy member, we will try to keep the hearing going if we can get somebody to go vote and come back. We will suspend briefly if we have to.

My first question is the individuals that go to Canada or Mexico and bring a higher capacity device back into the country, they are not violating any law by doing that, are they?

Mr. KNOLLENBERG. They are not. The toilets are actually exported to Canada, and in effect they are imported by Americans going over the line and back into the U.S.

Mr. BARTON. So a U.S. manufacturer can manufacture the higher capacity equipment and export it legally and then American citizens can go to foreign countries, purchase it legally and bring it back into the country legally?

Mr. KNOLLENBERG. Individuals can do that on an individual basis.

Mr. BARTON. And the current Federal standards that are on the books today, are those for individual homes or do they also encompass hotels and apartments?

Mr. KNOLLENBERG. They apply to both individual residences and commercial. That law went into effect a little later, but it has come on line now so it does impact the commercial products as well.

Mr. BARTON. So if we pass your legislation, we are not repealing the State and community right in a community setting to impose a standard, if they so wish?

Mr. KNOLLENBERG. They can do whatever they are doing now. This bill does nothing to intervene or involve itself with current law or practice. And what we literally are doing is saying if you love the 1.6 gallon toilets, you can have them. And in those areas that choose to take that type of device, they are certainly able to do so. But we don't have any movement or any opposition to that.

Mr. BARTON. Has any consumer group, Consumer Reports Magazine, Good Housekeeping, has anybody done any studies to verify the anecdotal evidence that the lower capacity toilets don't work as well?

Mr. KNOLLENBERG. Others will comment on that, Mr. Chairman, but yes, there have been those kinds of reports. And I would simply say, why am I hearing from thousands and thousands of people if these products work so well? And I would just tell you that people are not happy with the performance. They are not happy with the quality of performance. And if they choose to buy one that does work, they may find that it is going to cost substantially more than the typical standard regular toilet they have been used to. It is only when you get into changing or remodeling your bathroom or new home that you have this problem. So we have touched a small percentage of American's households, and I think that is why this flame has gotten pretty high with respect to irritation.

Mr. BARTON. What is your answer to the concern raised by the supporters of the existing law, Mr. Bilirakis and others, who say that water consumption has actually declined because of this new equipment, and that is a noble goal and if we repeal it, water consumption usage would go back up?

Mr. KNOLLENBERG. I don't believe that they will go back up. But let me just say that the studies that have been done only have a small percentage of American households that have had to make that conversion from the old to the new. The data is pretty much limited. It is very small.

And I would tell you that I personally would like to see water consumption reduced because I think we do have an obligation to consider that. If they can do it with 1.6 gallon toilets, great. If they can do it with 1 gallon, great. There is technology perhaps that is on the cusp of coming into being, but it is not here yet. What we have seen is they have slid a product into our face that is a one size fits all that may or may not work. Americans are not used to

that. They are unhappy and frustrated about it. So in the end I think we are on the same side of the fence but all of those communities that want to continue the water conservation problems that they have, even if they want to double flush, can do so.

Mr. BARTON. Assuming that we find support to mark this up in subcommittee and pass it at full committee, and that is an assumption, what is your view of how many votes this legislation might get as a stand-alone bill out on the floor?

Do you believe that you have got sufficient support to pass it on the House floor if we can get it through subcommittee and full committee?

Mr. KNOLLENBERG. I believe we can do that. Let me say also that the reason for this hearing is to bring this out in the open so we do have a chance to let the sun shine in and show members of the committee what is taking place here, that the mandate is not something that is going to hurt the existing law or the existing situation.

So I believe we will have a better opportunity after this hearing is concluded, and thank you for bringing about a successful move in the direction of bringing it to closure.

I would just tell you that any optimism is there, but I am only going to make a judgment on this after the hearing is over. I think that will help us a great deal.

Mr. BARTON. It just dawned on the chairman that the witness has to vote also. I can't continue the hearing because you would miss the vote. So we are going to recess but we are going to go vote and come back ASAP. I am not going to give a time. But as soon as the last vote is over, we will be reconvening within 10 minutes of the last vote on the House floor. So we are in recess very briefly.

[Brief recess.]

Mr. BARTON. The committee will come back to order.

The gentleman from Illinois, Mr. Rush, will be recognized for 5 minutes for questions.

Mr. RUSH. Thank you, Mr. Chairman. I am eager to unplug this process here.

Mr. BARTON. That is a mild way to put it.

Mr. RUSH. Mr. Knollenberg, there is a minimum standard right now of 1.6 gallons, I believe it is.

Mr. KNOLLENBERG. That's right.

Mr. RUSH. If you were going to raise the standard, what is your recommendation?

Mr. KNOLLENBERG. I have no recommendation. The bill speaks to no recommendation. It merely says let's get away from the 1.6 gallon toilets. Now that might generate through technology a toilet that works and performs because we are really looking at performance. That is our goal. It could be that they could work on a gallon. I don't have any higher level in mind, and the bill does not speak to any.

Mr. RUSH. Your bill has been around for a couple of years. Are there different States, Governors, or legislative bodies that have endorsed your bill?

Mr. KNOLLENBERG. We have not gone after Governors or legislative bodies, but what we have done is within the membership of

Congress we have concentrated on getting their endorsement and we have 85 Members of the House that have supported it openly.

What we do get of course, as you will find from these other gentleman who will testify, is support from a variety of arenas that are from people all over the country. The folks we are hearing from are from California and Maine and Michigan, Texas, all of them. I can't tell you that it has been anything but a panorama of response.

Mr. RUSH. My final question, Mr. Chairman, I just recently—just this year, moved from the Cannon Building to the Rayburn Building and I have noticed a difference in the way the toilets flush in the Rayburn Building versus the Cannon Building. Is the Federal Government, has the Congress—are our toilets—

Mr. BARTON. It is hard to phrase it properly.

Mr. RUSH. It is. Are we at the same standard? Does this law—are we adhering to the law?

Mr. KNOLLENBERG. The law comes into focus whenever there is a remodeling process or if there is a new building and they need to change the old toilets. So I couldn't tell you if we are or not. Honestly, you would have to ask somebody frankly who—perhaps the Architect would know the specifics of that. I can't even tell you whether it is a 1 gallon urinal. I can tell you about the 1.6 gallon toilet, and I can tell by the way it works or doesn't work.

Mr. BARTON. We are not subject to the specific law because the building was constructed before 1992.

Mr. KNOLLENBERG. There is no mandate that says you have to change tomorrow. You can last for 50 years. If the thing works, you can keep it. I am just not aware of what that status is.

Mr. RUSH. I am sure that this law is not—that this standard is not operational for the Members of Congress because we don't hear the same outcries that we hear from consumers. So I am sure that it is not the same standard.

I yield back the balance of my time, Mr. Chairman.

Mr. BARTON. I now recognize Congressman Bilirakis for 5 minutes of questions only.

Mr. BILIRAKIS. Thank you, Mr. Chairman. Joe, and I want to commend you and compliment you for your presentation.

Mr. KNOLLENBERG. Thank you.

Mr. BILIRAKIS. I am not belittling this issue, but we have had some high powered health care hearings and things of that nature, and we never can get any media, and you somehow managed to get the media here today. Maybe I can learn from you in that regard.

Mr. BARTON. It is just his smiling face that they like to cover.

Mr. BILIRAKIS. And my not smiling face, I guess.

The gentleman from Illinois just said that he has not had an avalanche of indications here on this legislation. We have received 5 letters over 3 years since you first introduced your legislation in support of your legislation, and I am advised by my staff we have about a half foot high pieces of communication, principally I will admit from suppliers and plumbers and whatnot, who are very much against the legislation, Joe.

Again, I want to repeat because the chairman and I spoke about this on the way back from the vote, the 328 to 79 vote that a couple of us have mentioned previously, that was not a vote on the omnibus piece of legislation, the water bill. That was a vote on adding

this amendment, to the omnibus bill back in May 1992. So we had 328 members who at that time felt very strong about this issue. Obviously an awful lot of those 328 felt, including myself, are very much for States rights and generally against more government regulations and things of that nature. Yet Congress felt awfully strongly back in those days that it was necessary to do something here. The State of Pennsylvania is going through drought problems, as are so many other parts of the country.

I am also advised that Consumer Reports tells us that their post-installation studies promoting major toilet rebate and replacement program show a significant degree of satisfaction with the new fixtures.

San Diego consumers who participated in a toilet rebate replacement program were satisfied with their new 1.6 gallon per flush toilets. In Austin 95 percent of users were satisfied; and Tampa, Florida, 91 percent were satisfied. And Joe, on the double flushing situation I am also told, and this will be testified to later on by our Tampa representative, in a soon to be released study, AWWA Research Foundation has found that even in instances of double flushing, the slightly higher flushes per day did not offset the volume of water used by the larger volume flush toilets. And further, the study stated that on average double flushing of low flush toilets does not appear to happen any more often than double flushing of nonlow-flush toilets.

So we have talked about customer satisfaction and the double flushing. We have talked about the strong support for this legislation on this particular amendment, if you will, adding it to the overall bill. We have talked about the nonavalanche of letters that I have received. What I have received have been against your legislation. With all due respect, we had good reasons to do it back at that time. You have good reasons, I am sure, to come in with your piece of legislation. I can ask you maybe a question and that sort of thing, but I don't know that we really ought to be doing that.

Mr. KNOLLENBERG. Could I respond.

Mr. BARTON. I didn't hear a question.

Mr. KNOLLENBERG. I think you brought up a good point, if you would indulge. You are right about that vote, it was on the amendment.

Mr. BARTON. Let the record show that I voted against it, though.

Mr. KNOLLENBERG. I want to remind you the limited amount of debate was probably 10 to 15 minutes. You also remember this was an amendment to a much larger bill. And it was done in a very sped-up fashion. Some of the folks that voted for that particular amendment the last time are on my bill. So I think you have to also realize that it was probably done in—

Mr. BILIRAKIS. They are going to have to answer to that.

Mr. KNOLLENBERG. I know about Consumers Reports and the studies which have been done. You can get them. But I can tell you if you only had five, I have tens of thousands. Well over 10,000 responses, I can tell you for sure. We have those locked in a room. Perhaps you are on a closed circuit. We are not and we got tons of them.

Mr. BARTON. The Chair will stipulate that there are members that try to be on both sides of an issue. I know that is a revelation.

I can see how people would vote for the amendment that Congressman Bilirakis supported and then be on your bill. It would not be the first time that a member has tried to placate both sides of an issue.

The gentleman from Georgia, Mr. Norwood, is recognized for 5 minutes.

Mr. NORWOOD. Thank you very much, Mr. Chairman.

Mr. Knollenberg, as you know, the 103d Congress made a lot of votes. One of them was this amendment, and then the 104th Congress really changed a great deal. Are there any studies showing that great big change in Congress from the 103d to the 104th might have been related to the 328 votes that voted for this Federal Government controlling our bathrooms.

Mr. BARTON. It was the 102d Congress. There was a change between the 102d and 104th.

Mr. KNOLLENBERG. We have not analyzed that.

Mr. NORWOOD. I would if I were you.

Mr. KNOLLENBERG. That bill in its original form wasn't effective overnight. The trigger was forward on both residential and commercial. So if you are talking commercial, they were not affected until a couple of years later. So I think it had a future effective date. It didn't appear to be a problem of immediate concern, and it wasn't. It has only been when you remodel or only when you build a new house you have to deal with the problem.

Mr. NORWOOD. Are you familiar, Mr. Knollenberg, with the studies I keep hearing thrown out saying since we have gone to the 1.6 gallon per flush toilet, such and such community saved X amount of water? Do you know how they determine that?

Mr. KNOLLENBERG. I am familiar with several of those studies. In fact, I think they are all flawed. Keep in mind that everybody in a given community has not made the conversion. In fact, in some communities very few have made the conversion from the old to the 1.6. I think you can infer a lot of things from an investigation or survey, but quite honestly, I think they are all flawed. I would even tell you that Consumers Report, if you read that one, cover to cover, I would challenge some of the comments made by recommendations that are made by Consumers Report. Incidentally, in the end they did not exactly really come down totally in favor of the idea, it was sort of the lukewarm endorsements.

Mr. NORWOOD. How do they measure the amount of water saved at the wastewater treatment plant unless you can isolate the amount of water coming from the toilet to the wastewater treatment plant? How do you do this?

Mr. KNOLLENBERG. I think that is a good question. Frankly, I don't know how to do that. I recognize that is a problem though. I think some of the people that are going to appear on the next panel will be in a position to give you some insight there. In certain localities where they have not mandated, actually converted everything to the 1.6, they probably can draw from that conclusion that there is—that would be something I think that might be readable as maybe more factual.

On the other hand, what was there before? Who knows? Was it a building that, frankly, had some ill working plumbing to begin

with? Did they convert from that to the 1.6? The consumer will not know any difference.

Mr. BARTON. If the gentleman would yield quickly, what was the traditional standard toilet size before we went to 1.6?

Mr. KNOLLENBERG. It is interesting, I heard a comment here, I don't know who made it, that in 1970, some study, you could have had a 5 gallon, one bigger than that. I can't tell you exactly the date, perhaps others can, when they went to a 3.5, but you have—remember the older closets up on top? Those held some pretty substantial volumes of water.

Mr. BARTON. Is it fair to say that we cut it in half at a minimum?

Mr. KNOLLENBERG. I think you can say that, yes. The 1.6's did not just come out in 1992. They have been around for some time. Of course, the magic of 1.6 is that it is 6 liters. Where does that come from? We are not on the metric standard.

Mr. BILBRAY. Will the gentleman yield further? Isn't it true that prior to 1992, there are a number of States that already established 1.6 standards?

Mr. KNOLLENBERG. That is right. And, you know, Mr. Bilirakis, they can still do that. If they wanted that kind of system, they can still have it. My bill does not prevent that.

Mr. BILBRAY. I guess the point is there must have been some magic to the 1.6 for them to do it, 17 to do it, either prior or even having thought of it.

Mr. KNOLLENBERG. Certain communities across the country, and you know where they are, obviously, did go to a water conservation method that included the 1.6's. I don't know if that was a central mandate within that particular governmental entity, but I do know that they have done that.

How, all I can say is they choose to do that. If their happiness in performance is satisfactory, if their performance is satisfactory, and they are happy about it, then I would say that they have nothing to worry about. We are not going to touch that. This bill does not get into that. We just do not think that a one size fits all is good for the entire country.

Mr. BILBRAY. Thank you. I apologize.

Mr. NORWOOD. No problem. Mr. Chairman, thank you.

In conclusion, and perhaps this question is directed to counsel or you, but I understood you to say that the reason we really don't have any trouble with any of this in Washington, or at least in the Federal buildings, is that none of this applies to any of the Federal buildings built prior to 1992.

Mr. BARTON. That is correct, unless we were to do a massive remodeling program. Then I think it would apply. I am not even sure it would apply in that case. It would be interesting. It could be argued it would apply.

Mr. NORWOOD. Would it apply if you simply wanted to repaint the inside of Rayburn? Does that mean you would also have to change the toilets?

Mr. BARTON. No.

Mr. NORWOOD. Is that true in the private sector?

Mr. BARTON. I think you can repaint without having to redo toilets in the private sector. I am speaking like I really know what I am saying here. So far the experts are nodding their heads.

Mr. NORWOOD. Well, part of what you said was it really costs a lot of money if we had to do it at this level up here. It would be very—

Mr. BARTON. Actually Mr. Rush said that.

Mr. NORWOOD. Well, I presume it would take a lot of money to redo all of these buildings. But, you know, it takes a lot of money for a little individual to have to redo their building too, to replace perfectly good toilets, to put in new toilets because 328 people up here debated 10 minutes they ought to have to do it. So I encourage you, Mr. Knollenberg, we will get there.

Mr. BARTON. I believe the next gentleman who was here at the time would be the gentleman from Tennessee, Mr. Bryant, for 5 minutes.

Mr. BRYANT. Thank you, Mr. Chairman. I would still have an interest in hearing from other panel members, and I appreciate very much Mr. Knollenberg's very fine presentation. In light of our time constraints, I would like to go ahead and move forward and yield back my time.

Mr. BARTON. The gentleman from Illinois, I would encourage you to follow the standard just set by the gentleman from Tennessee.

Mr. SHIMKUS. I have great respect for my friend and colleague from Tennessee and I follow the same standard.

Mr. BARTON. Thank you. I see no other member present who has not had an opportunity. We will hold the record open for any questions members wish to forward to you. We thank you for your persistence in this, Congressman. I think based on the next two panels, we will see if there is a consensus on whether to move forward or not. We appreciate your testimony, but you are excused at this point in time.

Mr. KNOLLENBERG. Mr. Chairman, members, thank you. I greatly appreciate you being willing to listen to all this.

Mr. BARTON. We would now like the second panel to come forward. We have Mr. Ben Lieberman, who is representing the National Consumer Coalition. We have Mr. Glenn Haege, who is a talk show host in Michigan. We have Mr. Gerald Kosmensky, who is the President of Gerald building company, a construction company, and Mr. Jerome Taylor, who is the Director of Natural Resource Studies for the Cato Institute.

Gentleman, welcome to the committee. Your statements are in the record in their entirety. We are going to start with Mr. Lieberman and go right down the line and give you each 5 minutes to summarize. Then we will have questions.

STATEMENTS OF BEN LIEBERMAN, POLICY ANALYST, COMPETITIVE ENTERPRISE INSTITUTE, REPRESENTING THE NATIONAL CONSUMER COALITION; GLENN HAEGE, TALK SHOW HOST, WXYT; GERALD KOSMENSKY, PRESIDENT, GERALD BUILDING COMPANY; AND JEROME TAYLOR, DIRECTOR OF NATURAL RESOURCE STUDIES, CATO INSTITUTE

Mr. LIEBERMAN. Good afternoon. My name is Ben Lieberman and I am a policy analyst with the Competitive Enterprise Institute.

Mr. BARTON. You need to put the microphone close to you, Mr. Lieberman.

Mr. LIEBERMAN. The Competitive Enterprise Institute is a public policy organization committed to advancing the principles of free enterprise and limited government. Today I represent 9 member organizations of the National Consumer Coalition, with a total of more than 3 million members. None of the groups I am representing today receive Federal funding relevant to the subject of these hearings, and none have a financial stake in this matter. My remarks will focus on the consumer perspective on the Federal law mandating low flush toilets. I believe that consumers have been harmed by this law and that passage of H.R. 623, which would repeal it, is in the best interests of the American people.

In 1992, several conservation and environmental lobbyists were successful in adding language to the Energy Policy Act requiring that toilets use no more than 1.6 gallons per flush, less than half the water of most existing models. At the time, the general public had virtually no idea what was being done to them. However, since the mandate took effect in 1994, millions of Americans, whether buying a new house or just replacing an old toilet, have had bad experiences with these water stingy models.

Simply put, these new toilets do not perform as well as their higher flush predecessors, yet cost considerably more. Many complain that the new toilets require increased cleaning and clog up more frequently. Others complain of the need to flush more than once, which in addition to being annoying and unpleasant, cuts into the amount of water that is actually conserved.

Some insist that these problems are few and far between, or only apply to the earliest of the low flush models, but such is not the case. Quite the contrary, I have never seen a stronger grassroots backlash against a product than the one against low flush toilets. And although some of the newest 1.6 gallons per flush models are improvements over previous low flush versions, they are still not as good as the higher flush models, and the best of them cost considerably more. Indeed, a 1998 National Association of Home Builders survey found that 72 percent of homebuilders consider the 1.6 gallon toilets to be a problem.

I think it is clear that there is widespread consumer dissatisfaction with these toilets. Nonetheless, I am sure we will hear arguments to the contrary from plumbing fixture manufacturers who currently enjoy a guaranteed market for these expensive low flush toilets that would never be able to compete in the absence of a mandate. We will probably hear similar arguments from various bureaucrats and activists who have been involved in this issue over the years. But before we get bogged down in the debate over which kind of toilet is best, let's not forget what the real controversy is: The issue is not whether low flush toilets are better or worse than high flush toilets; the real issue is who should get to decide such things, individual consumers, or special interests. Clearly, this is a choice best left to the consumer, and that is what H.R. 623 would do.

Proponents of low flush toilets have implied that H.R. 623 would somehow restrict the availability of low flush toilets, but nothing could be further from the truth. This bill in no way stops anyone

who wishes to continue selling 1.6 gallon per flush toilets from doing so. It also in no way restricts consumers from buying low flush toilets, if that is what they really want. H.R. 623 would only serve to expand consumer choice by making the sale of higher flush toilets legal once again.

By the way, this is why I find it so hard to believe the critics of H.R. 623, who insist that the new low flush toilets are as good or even better than the old style toilets. Assuming the 1.6 gallons per flush toilets are as good as their proponents say, then why are they so afraid of a little competition from the higher flush models?

Looking into the future, if the low flush mandate is not repealed, the situation will likely get worse, not better, in the years ahead. Keep in mind that the 1.6 gallons per flush figure is just the starting point. The language in the statute delegates to the Department of Energy the authority to set even tighter standards in the future. And, as anyone familiar with Federal agencies knows, bureaucrats rarely pass up such opportunities, especially when pressured by special interests, some of whom are already hinting that more needs to be done.

If H.R. 623 does not pass and the current law remains in place, expect a future push for 1.4 or 1.2, or maybe even 1.0 gallons per flush toilets standards, the result of which could be even bigger problems for consumers.

Although my remarks today focus on the consumer impact of the low flow toilet mandate, I would like to briefly address the conservation arguments put forward to justify this costly and intrusive measure.

The claim made by the supporters of low flush toilets is that we need nationwide conservation measures to avert the coming national water crisis.

Mr. BARTON. You can at least finish your sentence.

Mr. LIEBERMAN. Let me go right to the end.

Mr. BARTON. Get to the bottom line here.

Mr. LIEBERMAN. The bottom line. In conclusion, I would like to try to put this issue in a broader context, especially since some in Congress may not see this as terribly important.

Underperforming toilets, after all, are not as serious as most issues you deal with. But in a larger sense, the low flush toilet controversy and its resolution could be a signal for Washington's future direction.

A Federal Government that believes it has the right, the need, and, quite frankly, the competence to set design standards for toilets is a government losing sight of its limits and its limitations. And if our government is so beholden to special interests that it will continue to foist a clearly unwanted choice on the American people, then there are few constraints on the damage it can inflict.

On the other hand, a Congress that truly listens to the people, admits its mistake, and gets itself out of the plumbing business by passing H.R. 623 would be taking a very important step toward sensibility.

Thank you.

[The prepared statement of Ben Lieberman follows:]

PREPARED STATEMENT OF BEN LIEBERMAN, POLICY ANALYST, THE COMPETITIVE ENTERPRISE INSTITUTE REPRESENTING NINE MEMBERS OF THE NATIONAL CONSUMER COALITION

Good afternoon. My name is Ben Lieberman and I am a policy analyst with the Competitive Enterprise Institute, a public policy organization committed to advancing the principles of free enterprise and limited government. Today, I represent 9 member organizations of the National Consumer Coalition, with a total of more than 3 million members.¹ None of the groups I am representing today receive federal funding relevant to the subject of these hearings, and none have a financial stake in this matter. My remarks will focus on the consumer perspective on the federal law mandating low flush toilets. I believe that consumers have been harmed by this law, and that passage of HR 623, which would repeal it, is in the best interests of the American people.

A BAD IDEA WITH NO PUBLIC SUPPORT

In 1992, several conservation and environmental lobbyists were successful in adding language to the Energy Policy Act requiring that toilets use no more than 1.6 gallons per flush, less than half the water of most existing models. At the time, the general public had virtually no idea what was being done to them. However, since the mandate took effect in 1994, millions of Americans, whether buying a new house or just replacing an old toilet, have had bad experiences with these water stingy models.

Simply put, these new toilets do not perform as well as their higher flush predecessors, yet cost considerably more. Many complain that the new toilets require increased cleaning, and clog up more frequently. Others complain of the need to flush more than once, which in addition to being annoying and unpleasant, cuts into the amount of water that is actually conserved.

A WIDESPREAD CONSUMER BACKLASH AGAINST AN UNWANTED AND POORLY PERFORMING PRODUCT

Some insist that these problems are few and far between, or only apply to the earliest of the low flush models, but such is not the case. Quite the contrary, I have never seen a stronger grassroots backlash against a product than the one against low flush toilets. And, although some of the newest 1.6 gallons per flush models are improvements over previous low flush versions, they are still not nearly as good as the higher flush models, and the best of them cost considerably more. Indeed, a 1998 National Association of Homebuilders survey found that 72 percent of homebuilders consider the 1.6 gallon toilets to be a problem.

CONSUMERS HAVE A RIGHT TO CHOOSE FOR THEMSELVES

I think its clear that there is widespread consumer dissatisfaction with these toilets. Nonetheless, I am sure we will hear arguments to the contrary from plumbing fixture manufacturers, who currently enjoy a guaranteed market for these expensive low flush toilets that would never be able to compete in the absence of a mandate. We will probably also hear similar arguments from various bureaucrats and activists who have been involved in this issue over the years. But before we get bogged down in the debate over which kind of toilet is best, lets not forget what the real controversy is. The issue is not whether low flush toilets are better or worse than high flush toilets; the real issue is who should get to decide such things, individual consumers, or special interests. Clearly, this is a choice best left to the consumer, and that is what HR 623 would do.

HR 623 WOULD SERVE TO EXPAND CONSUMER CHOICE

Proponents of low flush toilets have implied that HR 623 would somehow restrict the availability of low flush toilets, but nothing could be further from the truth. This bill in no way stops anyone who wishes to continue selling 1.6 gallons per flush toilets from doing so. It also in no way restricts consumers from buying low flush toilets, if that's what they really want. HR 623 would only serve to expand consumer choice by making the sale of higher flush toilets legal once again. By the way, this is why I find it so hard to believe the critics of HR 623 who insist that the new low flush toilets are as good or even better than the old style toilets. Assuming the

¹ 60 Plus Association, Americans for Tax Reform, Association of Concerned Taxpayers, Citizens for a Sound Economy, Competitive Enterprise Institute, Consumer Alert, Frontiers of Freedom, Heartland Institute, Seniors Coalition.

1.6 gallons per flush toilets are as good as their proponents say, then why are they so afraid of a little competition from the higher flush models?

AS BAD AS THINGS ARE, REGULATORS COULD MAKE THEM WORSE

Looking into the future, if the low flush mandate is not repealed, the situation will likely get worse, not better, in the years ahead. Keep in mind that the 1.6 gallons per flush figure is just the starting point. The language in the statute delegates to the Department of Energy the authority to set even tighter standards in the future. And, as anyone familiar with federal agencies knows, bureaucrats rarely pass up such opportunities, especially when pressured by special interests, some of whom are already hinting that more needs to be done. If HR 623 does not pass and the current law remains in place, expect a future push for 1.4, or 1.2, or maybe even 1.0 gallons per flush toilets standards, the result of which would be even bigger problems for consumers.

THE CONSERVATION RATIONALE BEHIND THIS MEASURE DOES NOT MAKE SENSE

Although my remarks focus on the consumer impact of the low flow toilet mandate, I would briefly like to address the conservation arguments put forward to justify this costly and intrusive measure. The claim made by the supporters of the low flush toilet mandate is that we need nationwide water conservation measures to avert the coming national water crisis. This argument greatly exaggerates the problem, and is but the latest in a long line of resource depletion doomsday scenarios, virtually none of which has ever come true. In fact, take out the word water, put in the word energy, and we've been through all this before with the energy crisis of the 1970s. If you remember back then, the self-proclaimed experts insisted that the world was going to run out of oil, by some estimates as soon as the 1980s or 1990s. They argued that federal conservation measures were the only way to prevent a very bleak future. Unfortunately, Congress believed them and enacted laws that burdened consumers with gas rationing and wasted billions of tax dollars on synthetic fuels research and other boondoggles. And of course, the energy crisis turned out to be a complete dud. Today, we're hearing the very same arguments (and in a few cases, the very same people making those arguments) in regards to the supposed water crisis. But the doomsayers track record indicates that we should be skeptical.

The reality is that water is cheap and plentiful for the majority of Americans. Personally, I live in the Washington, DC metro area and pay about \$4 and change for every thousand gallons, and that's water and sewer combined. Now I'm not a water policy expert, but \$4 for a thousand gallons doesn't sound like a crisis to me. And what is true for this area is true for most of the nation. Now granted, there are parts of the country where water is more scarce or where sewage treatment facilities are bumping up against capacity, and we will hear from water officials representing those areas. However, these are local problems that can best be dealt with at the state or local level, and most likely in smarter ways than low flush toilet mandates. The current law simply forces a costly and intrusive solution on all Americans for something that simply is not a problem for most of them.

THERE IS NO NEED FOR A FEDERAL ONE-SIZE-FITS-ALL TOILET STANDARD

Defenders of the status quo have also made the argument that if the federal low flush law is repealed, it will just be replaced by a patchwork of conflicting state standards. Thus they argue, we are better off with a uniform federal low flush statute. This argument fails for several reasons.

First of all, low flush toilet mandates are a very unpopular idea, and that is just as true at the state level as it is at the federal level. If the 1.6 mandate is killed by Congress, it probably will die out at the state level as well. Granted, there were some states that enacted low flush standards just prior to the Energy Policy Act, but these laws were passed in much the same way as the federal law—by special interests, working behind the scenes, with little if any public awareness, let alone public support. But today, the cat is out of the bag, the public has had to deal with the new toilets for several years, and they clearly don't like this mandate, no matter what level of government is trying to impose it. At this point, I find it hard to believe that the citizens of any state would put up with a low flush toilet standard that uniquely burdens them. But even if I am wrong and a few state governments try to retain the 1.6 gallons per flush standard, so be it. That is hardly an excuse to burden the citizens of all the other states as well. Again, the argument that we need a heavy handed, one-size-fits-all federal standard in order to usurp the states simply does not make sense.

CONCLUSION

In conclusion, I would like to try to put this issue in a broader context, especially since some in Congress may not see this issue as terribly important. Underperforming toilets, after all, are not as serious as most issues you deal with. But in a larger sense, the low flush toilet controversy and its resolution could be signal for Washington's future direction. A federal government that believes it has the right, the need, and quite frankly the competence to set design standards for toilets, is a government losing sight of its limits, and its limitations. And if our government is so beholden to special interests that it will continue to foist a clearly unwanted choice on the American people, then there are few constraints on the damage it can inflict.

On the other hand, a Congress that truly listens to the people, admits its mistake, and gets itself out of the plumbing business by passing HR 623 would be taking a very important step towards sensibility. Thank you.

Mr. BARTON. Thank you, Mr. Lieberman.

Mr. Haege, your statement is in the record. We would ask you to try to summarize in 5 minutes.

STATEMENT OF GLENN HAEGE

Mr. HAEGE. Thank you, Mr. Chairman. I appreciate the opportunity to speak with you and the committee today regarding this important bill under consideration, namely, the Plumbing Standards Improvement Act of 1999.

This is a very important issue that affects every American in a very personal way. I would also like to thank Congressman Joe Knollenberg for introducing this bill.

Mr. Chairman, first I feel that it is important to establish my background for you and the other members and why I feel very qualified to speak as an expert on home improvement and on the behalf of a great number of American homeowners across this country.

My name is Glen Haege. I am known professionally as America's Master Handyman. Over 30 years ago I began my professional career working as a retail store manager and trainer for one of the country's leading paint manufacturers; namely, the Sherwin Williams Paint Company.

After 8 years, I then began working in the retail hardware industry as the general merchandise manager for ACO Hardware, the largest independent hardware store chain in the country, and served as one of their directors.

Eighteen years ago I began making appearances on various radio and television programs on behalf of the hardware store chain to present advice and answer home improvement questions from listeners. In 1983, I began hosting my own radio call-in program called the "Ask the Handy Man" with Glen Haege show, on week-ends on CBS owned WXYT radio in Detroit. The program was expanded over the years and now airs for 8 hours every weekend.

Starting in October 1996, a 2-hour portion of my program has been nationally syndicated across the entire country. My show airs on stations in 48 States and on close to 200 radio stations. It is the most popular home improvement radio show in the Nation. It is estimated that over the years I have answered over 50,000 home improvement questions from listeners and at personal appearances.

Fellow broadcast industry executives have also recognized my talents and I have recently been named as one of the 100 most important radio talk show hosts in America. In addition, I write a

weekly newspaper article for the Detroit News, which is syndicated around the country by Gannett Newspapers. I am also the author of 8 books on the subject of home improvement.

Mr. BARTON. We will stipulate you are an expert.

Mr. HAEGE. Thank you. From these conversations, I can tell you without a doubt that there is a major problem in the bathrooms across America. It is just beginning to become apparent to most people. Basically, people everywhere complain their newer, low flush toilets just don't work.

They don't know what is causing the problem, but they constantly complain about the toilets do not function properly to remove waste from the bowl and they have to flush repeatedly to get the job done.

I have attended numerous trade industry shows and have discovered an interesting fact. Many plumbing manufacturers have boasted proudly that they are on their fourth or fifth generation design for their toilet bowls in a period of only 3 years. Why are they having to keep spending their research and development dollars to keep redesigning 1.6 gallon flush toilets so often in such a short period of time?

The passing of the amendments to the Energy Policy Act in 1992 that mandated these new low flush toilets have spawned the growth of a new industry product called vacuum assisted flush systems. These are what you gentleman use in the building that you are talking about. They have added an average of \$200 to the cost of a toilet. You may not know, but these vacuum flush systems have been installed in most new commercial buildings, such as the one in the Capitol. I know that many Members of Congress have received calls and letters from their constituents written on toilet paper. I started that in March 1997.

I have also been the recipient of thousands of notes and letters complaining. Many of them paid for plumbing professionals to come to their home and fix their toilet, only to be told that you should keep a yardstick next to their toilet to break up the waste so it would go down.

It has gotten to the point that many Americans are crossing the border to Canada and Mexico to purchase these now illegal toilets, bringing them back over the border. This is not the way to handle this situation.

Who is complaining about the 3.5 gallon toilets? Not the homeowners, gentleman. They were very satisfied with a system that has worked well for years. What measures of conservation are served when the homeowners have to flush several times? Nothing is saved. More resources are wasted.

It is not a safety issue, it is not a cosmetic issue, it is a real pain in the bathroom that needs a second look. All we are saying is give people a choice. I know that you all know the old adage of if it ain't broke, don't fix it. Well, in my opinion and the opinion of thousands of people across America that call in to my radio program, the old 3.5 gallon flush toilets were not broken and the fix that was passed in 1992 by the U.S. Congress that mandates 1.6 gallon flush toilets is just not working, Mr. Chairman.

Thank you.

[The prepared statement of Glenn Haege follows:]

PREPARED STATEMENT OF GLENN HAEGE, TALK SHOW HOST, WXYT

Thank you, Mr. Chairman, I appreciate the opportunity to speak with you, and the Committee, today regarding this important bill under consideration, namely, the Plumbing Standards Improvement Act of 1999.

This is a very important issue that affects every American in a very personal way.

I would also like to thank Congressman Joe Knollenberg for introducing this Bill.

Mr. Chairman, first I feel that it is important to establish my background for you and the other members of the committee and why I feel very qualified to speak as an expert on home improvement and on the behalf of a great number of American homeowners across the country.

My name is Glenn Haege. I am known professionally as America's Master Handyman.

Over 30 years ago, I began my professional career working as a retail store manager and trainer for one of the country's leading paint manufacturers, namely, the Sherwin Williams Paint Company.

After 8 years, I then began working in the retail hardware industry as the General Merchandise Manager for ACO Hardware, the largest independent hardware store chain in the country, and served as one of their Directors.

18 years ago I began making appearances on various radio and television programs, on behalf of the hardware store chain, to present advice and answer home improvement questions from listeners. In 1983, I began hosting my own radio call-in program, called the "Ask the Handyman" with Glenn Haege show, on weekends, on CBS-owned, WXYT-AM radio in Detroit.

This program was expanded over the years and now airs for eight hours, live, every weekend.

Starting in October 1996, a two-hour portion of my program has been nationally syndicated across the entire country. My show airs on stations in 48 states and on close to 200 radio stations. It is the most popular home improvement radio show in the nation.

It is estimated, that over the years, I have answered over 50,000 home improvement questions from listeners and at personal appearances.

Fellow broadcast industry executives have also recognized my talents and I have recently been named as "One of the 100 Most Important Radio Talk Show Hosts in America" for the second year in a row by Talkers Magazine, a leading trade publication.

In addition, I write a weekly newspaper article for *The Detroit News*, which is syndicated around the country by Gannett Newspapers. I also am the author of 8 books on the subject of home improvement. I have been quoted in major newspapers, such as The New York Times, The Washington Post, and The Boston Globe, regarding home improvement and this important issue.

Based on length of my program, the number of stations that carry my show, audience ratings, newspaper articles and books, I can tell you, without doubt, that I speak to more people about home improvement, every weekend, than anyone else in America.

This large audience reach gives me access to a great number of people who call in to discuss their home improvement problems.

From these conversations, I can tell you without a doubt that there is a major problem in bathrooms all across America. It is just beginning to become apparent to most people. Basically, people everywhere complain that their newer, low-flush, toilets just don't work.

They don't know what is causing the problem, but they constantly complain about the toilets do not function properly to remove waste from the bowl and that they have to flush repeatedly to get the job done.

I have attended numerous industry trade shows and have discovered an interesting fact. Many plumbing manufacturers have boasted proudly that they are on their fourth or fifth generation design for their toilet bowls in a period of only 3 years. Why are they having to keep spending their research and development dollars to keep redesigning 1.6 gallon flush toilets so often in such a short period of time? The answer must be because they, too, realize that their previous designed products just don't work.

The passing of the amendments to the Energy Policy Act in 1992 that mandated these new low-flush toilets have spawned the growth of a new industry product, namely, the vacuum-assisted flush systems. These are add-on products that go inside the toilet water tank and use water pressure to push the waste through the toilet. They have added an average of \$200 to the cost of a toilet. You may not know this, but these vacuum flush systems have been installed in most new commercial buildings, such as hotels, and maybe even right here in the U.S. Capitol. Since you

don't have to deal with this problem where you work, you may not understand the gravity of this situation throughout America.

I know that many members of Congress have received calls and letters from their constituents regarding this problem. I, also, have been the recipient of thousands of notes, many of them written on toilet paper, which ask the 'Government to get out of my toilet.'

I also got to read some of the horrible tales of woe from real Americans. Many of them paid for plumbing professionals to come to their home and fix their toilet problem only to be told that they should keep a yardstick next to the toilet to break up the waste so that it would go down easier.

It has gotten to the point that many Americans are crossing the border to Canada and Mexico to purchase these now illegal toilets and bringing them back over the border for installation in their homes. Believe it or not, but the current law has created a Black Market in toilet smuggling.

This is not the way to handle this situation. Who was complaining about the 3.5 toilets? Not the homeowners. They were very satisfied with a system that has worked well for years. What measures of conservation are served when the homeowners have to flush several times? Nothing is saved. More resources are wasted.

I am here today to ask that the American homeowners be given a choice. Let the consumer decide on what size toilet that they would like to have in their own home. Let the consumers decide what they want and the free market will deliver the products that are preferred. If consumers that want the 1.6-gallon toilets for their own home, let them have them, but please don't force these toilets in everyone's bathroom.

It is not a safety issue. It is not a cosmetic issue. It is a real pain in the bathroom that needs a second look. All we are saying is give people a choice.

I know that you all know the old adage 'if it ain't broke . . . don't fix it.' Well, in my opinion, and the opinion of thousands of people across America that call in to my radio program, the old 3.5 gallon flush toilets were not broken and the fix, that was passed in 1992 by the U.S. Congress that mandates 1.6 gallon flush toilets, is just not working.

Thank you.

Mr. BARTON. Thank you, Mr. Haege. We are very impressed with your background, by the way.

Mr. HAEGE. Thank you.

Mr. BARTON. That was impressive. I was not trying to belittle that. You obviously are an expert in that.

I would now like to hear from Mr. Kosmensky. Again, your statement is in the record and we recognize you to summarize it in 5 minutes.

STATEMENT OF GERALD KOSMENSKY

Mr. KOSMENSKY. Thank you, Mr. Chairman and members of the subcommittee, for the opportunity to testify before you today. My name is Gerald Kosmensky. I am a home builder from Southgate, Michigan, and I have been building houses for 40 years. I am the past President of the Building Industry Association of Southeastern Michigan and past President of the Michigan Home Builders Association. I am the Mayor of the city of Orchard Lake, Michigan, and a constituent of Representative Joe Knollenberg. I am pleased to be here to testify in support of H.R. 623, legislation repealing federally mandated 1.6 gallon flush toilets. I applaud Representative Knollenberg for introducing this important legislation.

I am also a Senior Life Director of the National Association of Home Builders and a member of the NAHB's Executive Committee. However, I am not here today testifying on behalf of NAHB. NAHB has recently taken a neutral stance on this legislation in the hope that the significant problems with the manufacturing of 1.6 gallon toilets can be worked out with the manufacturing community without further Federal Government intervention.

Fortunately, introduction of this bill has spurred productive discussions between the building industry and plumbing fixture manufacturers as to what must be done mechanically to low flow toilets so that they function properly.

The core problem addressed by H.R. 623 is that many low flow, 1.6 gallon toilets, just do not work. That means I have to place a product in a new home that is not going to function properly. This is very disturbing to a small businessman who has to rely on good referrals in order to drum up continued business. The bottom line is that my reputation as a builder is negatively affected when I am installing plumbing fixtures that do not work properly.

I hear time and time again from my colleagues all over the country that new home buyers are dissatisfied with their toilets. In some cases, builder friends of mine have indicated that at least half of their call backs are due to toilets not working properly. Every time a builder has to make this kind of call back, it takes time away from other projects.

Oftentimes when I tell a new homeowner that the reason their toilet doesn't work has nothing to do with the plumbing installment, but because of a Federal mandate on low flow toilets, they think I am joking, that I am making an excuse for the bad plumbing in a new home. I have made it a policy to tell my customers up front about the low flow law.

Coming from a State that borders Canada, where there is no 1.6 gallon requirement and 3.5 gallon toilets are the norm, many customers opt to buy their toilets on the black market. They can buy all the 3.5 gallon toilets they want with a short trip to Windsor, Ontario. This may sound ridiculous, but it is a fact and an issue which we address every time we build a new home.

There are many horror stories that I could share with you. I have heard of homeowners putting instructions on their bathroom doors for guests instructing them how to help make the toilet flush with plungers and extra cups of water. I submit to you this is absurd.

NAHB's research center in Maryland recently put a survey on their Internet site for consumers and homebuilders to comment on the performance of low flow toilets. The responses have been overwhelmingly negative with both consumers and builders citing dissatisfaction with 1.6 gallon toilets.

This is a common sense issue. If your toilets are not doing the job and homeowners are flushing twice or three times or pouring extra water in the bowl, we are not saving water or energy. If you stay in the shower for 5 or 10 minutes longer than you normally do because the water pressure is not getting the soap out of your hair, we are not saving water.

It is disturbing to me as a citizen of the United States that the Federal Government is regulating the water used in my toilet. I ask myself, what is next? I hear that there is a movement to require all washing machines to be front loaded, which uses less water and energy, that is true, but a front load machine also holds a smaller load, so that means you will have to do 4 loads instead of 2. I ask again, how are we saving water and energy in these instances?

I like to tell my customers that this mandate is government's version of planned obsolescence.

Once again, as a builder from Michigan who has to live with the fact that these fixtures do not work every day, I want to give my wholehearted support to H.R. 623 and Representative Knollenberg's efforts in this regard.

I want to thank the committee for allowing me to be here today.
[The prepared statement of Gerald Kosmensky follows:]

PREPARED STATEMENT OF GERALD "JERRY" KOSMENSKY, PRESIDENT, GERALD
BUILDING COMPANY

Thank you Mr. Chairman and members of the Subcommittee for the opportunity to testify before you today. My name is Jerry Kosmensky, I am a home builder from Southgate, Michigan and I have been building homes for 40 years. I am Past-President of the Building Industry Association of Southeastern Michigan and Past-President of the Michigan Home Builders Association. I am Mayor of the City of Orchard Lake, Michigan and a constituent of Representative Joe Knollenberg. I am pleased to be here to testify in support of H.R. 623; legislation repealing federally mandated 1.6-gallon flush toilets. I applaud Representative Knollenberg for introducing this important legislation.

I am also a Senior Life Director of the National Association of Home Builders (NAHB) and a member of NAHB's Executive Committee. However, I am not here today testifying on behalf of NAHB. NAHB has recently taken a neutral stance on this legislation in the hope that the significant problems with the manufacturing of 1.6-gallon toilets can be worked out with the manufacturing community without further federal government intervention. Fortunately, introduction of this bill has spurred productive discussions between the building industry and plumbing fixture manufacturers as to what must be done mechanically to low flow toilets so that they function properly.

The core problem addressed by H.R. 623 is that many low flow, 1.6-gallon toilets do not work. That means I have to place a product in a new home that is not going to function properly. This is very disturbing to a small businessman who has to rely on good referrals in order to drum up continued business. The bottom line is that my reputation as a builder is negatively effected when I am installing plumbing fixtures that do not work.

I hear time and time again from my colleagues all over the country that new homebuyers are dissatisfied with their toilets. In some cases, builder friends of mine have indicated that at least half of their callbacks are due to toilets not working properly. Every time a builder has a callback it takes time away from other projects.

Often times when I tell a new homeowner that the reason their toilet doesn't work has nothing to do with the plumbing installment, but because of a federal mandate on low flow toilets, they think I am joking—that I am making an excuse for the bad plumbing in the new home. I have made it a policy to tell my customers up front about the low flow law. Coming from a state that borders Canada, where there is no 1.6-gallon requirement and 3.5 gallon toilets are the norm, many customers opt to buy their toilets on the black market. They can buy all the 3.5-gallon toilets they want with a short trip to Windsor, Ontario. This may sound ridiculous, but it is a fact and an issue with which we address every time we build a new home.

There are many horror stories that I could share with you. I've heard of new home owners putting instructions on their bathroom doors for guests instructing them how to "help the toilet flush" with plungers and extra cups of water. This is absurd.

NAHB's Research Center, in Maryland, recently put a survey on their Internet sight for consumers and homebuilders to comment on the performance of low flow toilets. The responses have been overwhelmingly negative with both consumers and builders citing dissatisfaction with 1.6-gallon toilets.

This is a common sense issue. If your toilets are not doing the job and homeowners are flushing twice or three times or pouring extra water in the bowl, we are not saving water or energy. If you stay in the shower for 5 or 10 minutes longer than you normally do because the water pressure is not getting soap out of your hair, we are not saving water.

It is disturbing to me, as a citizen of the United States, that the federal government is regulating the water used in my toilet. I ask myself what is next. I hear that there is a movement to require all washing machines to be front loaded which uses less water and energy, but a front load machine also holds a smaller load, so that means you will just have to do four loads instead of two. I ask again, how are we saving water and energy in these instances.

I like to tell customers that this mandate is the government's version of "planned obsolescence."

Once again, as a builder from Michigan who has to live with the fact that these fixtures do not work everyday, I want to give my wholehearted support to H.R. 623 and Representative Knollenberg's efforts in this regard. Thank you for the committee's time.

Mr. BARTON. Thank you, Mr. Kosmensky. We would now like to hear from Mr. Taylor, who is representing the Cato Institute.

STATEMENT OF JEROME TAYLOR

Mr. TAYLOR. Thank you, Mr. Chairman. I would like to thank the members of the subcommittee for the opportunity to testify today on H.R. 623. My name is Jerry Taylor. I am Director of Natural Resource Studies at the Cato Institute. My comments this afternoon will attempt to put the discussion in context by addressing the underlying realities of water markets.

In brief, while there is a legitimate concern about water availability, overconsumption is an artificial phenomenon, a product of misguided public policy. Appliance standards are incapable of remedying the underlying causes of water scarcity and, moreover, introduce further distortions and inefficiencies in water markets. In my judgment, passage of H.R. 623 would move policy in the right direction.

First, let us consider the anatomy of present water markets. How much water is delivered to consumers and what price to sell it are determined by political entities, not market agents. Water prices have thus been kept artificially low. Overconsumption and occasional shortages have been the inevitable result. The government has reacted not by raising water prices, but by mandating conservation, primarily on the less politically influential. The plumbing fixture mandates of the 1992 EPAct are a primary example of the kind of technical engineering fixes employed to manage water supply and demand.

This story should sound familiar to this subcommittee. In fact, water policy today is a virtual carbon copy of energy policy in the 1970's. Then, as now, government rationalized regulation on the ground that a resource was too important and too scarce to be left to the marketplace. Then, as now, government restrained prices and controlled resource allocation to protect and subsidize various consumers. Then, as now, government responded to overconsumption not by freeing prices from government control, but by mandating conservation.

America should have learned a very few important things about economics from the energy experience of 1970's. First, when regulations keep pricing below market clearing levels, shortages inevitably follow. Shortages are an artifact of public policy, not geology.

Second, government agents cannot direct resource production, price or allocation decisions as efficiently as can market actors. When the tangled web of energy regulations were relaxed and eliminated in the 1980's, scarcity vanished.

Third, mandatory conservation signals are a poor substitute for accurate market signals. The only way to avoid shortages is to rely on free market pricing and allocation.

Finally, government directed conservation investments are unlikely to improve upon those that would be made if consumers are faced with the correct market signals.

Now, would removing the mandated purchase of low flow toilets and shower heads make matters worse in light of what I just outlined? I don't think so. Total water consumption from 1970 through 1990 declined in this country, despite growth in population and national GDP, and per capita use was lower in 1990 than at any time since 1965.

Absolute water consumption was about—is about in 1990 where it was in 1975. Those positive trends, I should point out, have nothing to do with government conservation mandates. In fact, they predate the standards we are discussing today. But those trends continue because, one, effluent charges were imposed on industry which provided an incentive to industry to reduce water consumption. Two, stricter water quality regulations provided an incentive to recycle industrial discharges; and, three, reductions in agricultural demand reduced irrigation needs.

Since 80 to 90 percent of all water consumption is by agricultural businesses in the 19 western-most States, low flow toilets or shower heads, no matter how efficient, do not have any appreciable impact on national water consumption. Conservationists, however, are right to fret over the overconsumption of water in the United States. Existing government policies are, frankly, absurd.

In parts of the West, for example, highly subsidized water is being used in arid and desert regions to irrigate price supported crops currently in surplus and groundwater is being so polluted and wildlife so endangered that this irrigation has required massive federally funded cleanup measures.

Water markets, like energy markets before them, need a dose of market discipline. Accurate pricing will surely even induce Americans to conserve. Some consumers may willingly install the very low flow shower heads and toilets targeted by H.R. 623. Others may decide that they value long, vigorous showers more than they value green lawns or a new pool. Governments, however, should not attempt to micromanage those decisions. Moreover, government should not hammer residential consumers for consumption habits that pale in comparison with the truly prodigious volumes of water being wasted as a direct consequence of government policy.

Americans should learn from the mistakes of the 1970's and free water provision consumption from regulatory control.

Thank you very much for your time, and I look forward to your questions.

[The prepared statement of Jerome Taylor follows:]

PREPARED STATEMENT OF JERRY TAYLOR, DIRECTOR, NATURAL RESOURCE STUDIES,
CATO INSTITUTE

I'd like to thank the members of the subcommittee on energy and power for the opportunity to testify today on HR 623, "The Plumbing Standards Improvement Act of 1999." My comments this afternoon will attempt to put the discussion in context by addressing the underlying realities of water markets. The plumbing standards at issue are but a small thread within the larger tapestry of national water policy, and an understanding of that policy is necessary to judge the merits of HR 623. In brief, while there is a legitimate concern about water availability, over-consumption is an artificial phenomenon—a product of misguided public policy. Appliance standards—such as those targeted for elimination by HR 623—are incapable of remedying the underlying causes of water scarcity and, moreover, introduce further distortions and inefficiencies in water markets. In fact, there are striking parallels between water and energy markets (and between water and energy policy) that serve to illuminate the underlying issues at stake in the debate over HR 623. In my judgement,

passage of “The Plumbing Standards Improvement Act” would move policy in the right direction.

The Anatomy of Present Water Markets

Water is delivered to consumers either by public entities or private companies regulated by public utility commissions. The questions of how much water to deliver to consumers—and what price to sell it—are likewise determined by political entities, not by market agents. Unfortunately—perhaps inevitably—governmental agents have directed water to politically powerful interests (primarily western agriculture) and under-supplied water to less politically powerful interests (urban consumers). Moreover, water prices have been kept artificially low.¹ Scarcity and shortage has been the inevitable result.²

Government has reacted—not by raising its price—but by mandating conservation, primarily on the less politically influential (the agricultural industry, which consumes 80-90 percent of all water withdrawn for human use,³ has been generally immune from such strict conservation mandates). The plumbing fixture mandates of the 1992 Energy Policy Act are a primary example of the kind of technical, engineering fixes employed to manage water supply and demand.⁴

The above story should sound familiar. In fact, water policy today is a virtual carbon copy of energy policy in the 1970s. The water industry, like the energy industry, is one of the nation’s largest—and most heavily regulated—businesses, delivering a life-sustaining resource crucial to the economy.⁵ Then, as now, government rationalized centralized control over the resource on the grounds that it was too important to leave to the marketplace, too scarce to be allocated by the cold logic of the invisible hand, and too riddled with market failures to be efficiently traded without government oversight.⁶ Then, as now, government restrained prices and controlled resource allocation to protect and/or subsidize various consumers. Acute scarcity was the natural result.⁷ Then, as now, government responded not by freeing prices but by mandating conservation.

What the Energy Experience Can Teach Us About Water Policy

America should have learned a few very important things about economics from the energy experience of the 1970s. First, when government regulations keep prices below market-clearing levels, shortages inevitably follow. Shortages are an artifact of public policy, not geology.⁸

Second, government agents cannot direct resource production, price, or allocation decisions as efficiently as can market actors.⁹ When the tangled web of energy regulations were relaxed or eliminated in the 1980s, scarcity vanished. Subsequent supply disruptions did not usher in the scarcities or inconveniences of the 1970s even

¹ Although present water charges are on average about half what they would be in a free market, the disparity between regulated and market price varies by consumer. Municipalities charge about \$1 per 1,000 gallons while industry and agriculture pay only 10 cents per 1,000 gallons. Contrast those prices with bottled water, which sells at about \$4,000 per 1,000 gallons. *Peter Rogers, America’s Water: Federal Roles and Responsibilities* (Cambridge: MIT Press, 1993), pg. 1, 186.

² Terry Anderson and Pamela Snyder, *Water Markets: Priming the Invisible Pump* (Washington: Cato Institute, 1997), p. 7.

³ *Ibid.*, p. 18.

⁴ Rogers, pp. 101-103.

⁵ The water industry is by far the most capital-intensive industry in America and, in terms of annual capital expenditures, ranks only behind electricity and petrochemicals. The federal government alone employs over 90,000 people in ten cabinet departments, two major independent agencies, and 34 smaller agencies to oversee 25 separate water programs governed by more than 200 sets of federal rules, regulations and laws. State and local governments employ and additional 50,000 regulators and consultants. Rogers, pg. 4, 15-16, 239-241.

⁶ *Ibid.*, 49-53

⁷ Robert L. Bradley, Jr., *Oil, Gas, and Government: The U.S. Experience* (Lanham, MD: Rowman & Littlefield, 1996), pg. 465-532, 629-710, and 1605-1694.

⁸ M.A. Adelman, *The Genie Out of the Bottle: World Oil Since 1970* (Cambridge: MIT Press, 1996, pp. 11-39). Stuart Burness and James Quirk have likewise noted that “Often, what appears to be a shortage of water is actually the manifestation of restrictions on water rights transfer.” “Water Laws, Water Transfers, and Economic Efficiency: The Colorado River,” *Journal of Law and Economics* 23, April 1980, p. 133.

⁹ “Price controls and allocations produced the gasoline waiting lines which were ‘made in the USA,’ not by the Arabs. They were made much worse by set-asides: first for farmers, then justice required them for truckers, etc. The result was more hoarding and less supply.” M.A. Adelman, “The World Oil Market: Fact and Fiction,” *Policy Analysis*, Cato Institute, forthcoming. For an extensive treatment, see Bradley 1996, pp. 1815-1910.

though the disruption of 1990 was as large or larger than those of the 1973 and 1979.¹⁰

Third—and most relevant to HR 623—mandatory conservation measures are a poor substitute for accurate price signals. It was rising prices—not mandatory conservation—which ultimately led to increases in energy efficiency in the 1970s and 1980s.¹¹ The only way to avoid shortages is to rely on free-market pricing and allocation.¹² Consumers circumvent mandatory conservation technologies by increasing consumption at the margin (the well-known “rebound effect”¹³) or procuring through indirect channels the resource being denied them. Their behavior seems to be in agreement with M.A. Adelman’s argument that “energy conservation for its own sake regardless of price is the talk of the madman in Dr. Strangelove, obsessed with his ‘precious bodily fluids.’”¹⁴

Finally, government directed conservation investments are unlikely to improve upon those that would be made if consumers were faced with correct market signals.¹⁵ Looking back at the mandatory energy conservation standards of the 1970s, MIT analysts observe that:

An error common to the programs was the concept that it was wrong to consume, rather than that we should consume wisely in view of the higher price of energy. For example, a goal was that we should consume less, even where less meant also less comfort, less productivity, and fewer goods and services—*regardless of the cost effectiveness*. The mistake was in presuming that conserving less energy was the goal, and that the goal had an intrinsic value. The blunder lives on today in the mandates of virtually all state energy agencies (emphasis in the original).¹⁶

In fact, the energy experience indicates that conservation mandates and subsidized efficiency will not even achieve the goal of reducing net consumption.¹⁷

HR 623: A First Step

Given the weak theoretical case for the plumbing standards established in the 1992 Energy Policy and Conservation Act (EPACT), consumer complaints about mandatory low-flow toilets and showers should be heeded by this Congress. HR 623 is indeed worthy of support.

Yet the underlying problem that motivated passage of those standards should not be dismissed lightly. Conservationists are right to fret over the excessive consumption of water in the United States. Yet there is no reason for panic. Total water consumption has declined over the past 20 years despite growth in population and national GDP, and per capita use today is lower than at any time since 1965. Absolute

¹⁰Robert L. Bradley, “What Now For U.S. Energy Policy? A Free Market Perspective,” Policy Analysis no. 145, Cato Institute, January 29, 1991, p. 2.

¹¹“Energy Security White Paper: U.S. Decisions and Global Trends,” American Petroleum Institute, Washington, 1988, pp. 83-85.

¹²Robert Hall and Robert Pindyck, “What to Do When Energy Prices Rise Again,” *The Public Interest* 65, Fall 1981, pp. 59-70 and Richard Gordon, *An Economic Analysis of World Energy Problems* (Cambridge, MA: MIT Press), 1981.

¹³Economists are well aware of the fact that improving technical energy efficiency reduces the cost of, and thereby tends to increase the consumption of, goods and services that use energy. The degree to which energy efficiency gains will lead to increases in energy consumption depends upon the elasticity of demand for each of the effected energy service. Unfortunately, “the rebound effect seems important for services with a significant conservation potential but negligible for services with a minor conservation potential in terms of kWhs” (Franz Wirl, *The Economics of Conservation Programs* (Boston: Kluwer Academic Publishers, 1997, pg. 31, 139). The rebound effect applies to firms as well. For empirical documentation of the rebound effect, see David Greene and L.A. Greening, “Energy Use, Technical Efficiency, and the Rebound Effect: A Review of the Literature,” Report to the Office of Policy Analysis and International Affairs, U.S. Department of Energy, December 1997. For a review of the literature regarding the rebound effect and automobile transportation, see David Greene, James Kahn, and Robert Gibson, “Fuel Economy Rebound Effect for U.S. Household Vehicles,” *Energy Journal* 20:3, 1999, pp. 6-10.

¹⁴Adelman 1993, p. 495.

¹⁵As Nobel Laureate F.A. Hayek has noted, “An economic actor on average knows better the environment in which he is acting and the probable consequences of his actions than does an outsider, no matter how clever the outsider may be.” F.A. Hayek, “The Use of Knowledge in Society,” *American Economic Review* 35, 1945, pp. 519-530. For a review of public versus private decision-making in the energy economy, see generally Wirl, pp. 119-142.

¹⁶Thomas Lee, Ben Ball, Jr., and Richard Tabors, *Energy Aftermath: How We Can Learn From the Blunders of the Past to Create a Hopeful Energy Future* (Boston: Harvard Business School Press, 1990), p. 61.

¹⁷Wirl, pp. 185-206.

water consumption is about where it was in 1975.¹⁸ Steep projections of future needs are flawed in that they confuse need with demand.¹⁹ Harvard's Peter Rogers thus "sees no water crises at present in either water quantity or water quality."²⁰ As far as the future, Rogers notes;

The United States could have a water crisis or just a modest increase in demand. Which forecast should be used?—If the regulators leave water sellers free to make water prices more nearly represent the marginal cost of supply, and if realistic pricing policies are pursued in cases where the supply has to be controlled by government, then the forecast crisis will never take place.²¹

Conservationists have identified a worrisome malady, yet their diagnosis of the problem and their prescription for recovery are incorrect.

Water markets—like the energy markets before them—need a dose of market discipline. Water supply, allocation, and pricing decisions should be left to market actors with limited interference from government. The old rationales for government control over the water industry are not persuasive either theoretically or empirically.²² Consumers have proven quite responsive to changes in water prices and water markets have been shown to work quite well when released from regulatory constraints.²³ This is particularly true in acute drought conditions, when government price controls are most counterproductive.²⁴ While state and local governments are primarily responsible for the municipal provision of water, the federal government should assist by eliminating to the greatest degree possible its own interventions in the water economy. Greater reliance on market pricing could be introduced to federal water project entitlements.²⁵ Allowing water transactions between consumer groups would also greatly facilitate the development of water markets.²⁶ The Commerce Clause could even be invoked to facilitate a break-up of state regulation.²⁷

Accurate price signals will surely induce Americans to conserve. Some consumers may willingly install the very low-flow shower heads and toilets targeted by HR 623. Others may decide that they value long, vigorous showers more than they value green lawns. More importantly, accurate price signals will reach the greatest sources of water waste and over-consumption—the agricultural industry—and even modest reductions in use would overwhelm the potential gains from residential con-

¹⁸ Rogers, pp. 34-35. The main reason water consumption has dropped over the past 20 years is that (1) effluent charges were imposed on industry (providing an incentive to reduce water discharges and thus water consumption itself), (2) stricter water quality regulations provided an incentive to recycle discharges, and (3) reductions in agricultural demand reduced irrigation needs. Rogers, pg. 126, 147.

¹⁹ "Demand" is a function of economics, the quantity of water that consumers are willing to purchase at various prices. "Need" is a projection of future trends based upon present price signals. *Ibid.*, pp. 125-131.

²⁰ *Ibid.*, p. 199.

²¹ *Ibid.*, p. 131.

²² Anderson and Snyder, pp. 49-53.

²³ Harvard's Peter Rogers concludes that "First, the market seems to work quite well in allocating scarce water, specifically in the West. In fact, it works better than most economists themselves would have predicted only 10 years ago. Second, water consumption is clearly price responsive. The problem is finding some reasonable second-or third-best pricing schemes—In sum, while economic analysis and economic thinking by no means solve all the problems in the field, water managers and consumers must apply them if a coherent water policy is to emerge in the United States." Rogers, p. 150. See further Anderson and Snyder, pp. 8-12.

²⁴ Concludes oil economist M.A. Adelman, "The almost unquestioned major premise among governments that in an emergency there has got to be a 'fair allocation at reasonable prices,' is possibly the greatest single aggravating force in making disruptions worse than they need be." M.A. Adelman, *The Economics of Oil Supply* (Cambridge: MIT Press, 1993), p. 516. The success of the Drought Water Bank in California in ameliorating the worst effects of the 1987-1993 drought are clear testaments to the dramatic gains that can be achieved by simply allowing market transactions in water. Rogers, pp. 8-10.

²⁵ Rogers (p. 187) argues that "federal water project development has proceeded unevenly, inefficiently, and inequitably. It has been driven largely by the dictates of distributive politics. The result has been water often not available where it is most needed or desired and wasted or abused where it is available." Reallocation of water rights by the Bureau of Reclamation, the Army Corps of Engineers, the Tennessee Valley Authority, and the Soil Conservation Service would prove a major step in the right direction.

²⁶ *Ibid.*, p. 154.

²⁷ For a comprehensive federal agenda for reform, see Anderson and Snyder. For a discussion of how the Commerce Clause might be used to constrain state and local regulation of the industry, see Paul Ballonoff, *Energy: Ending the Never Ending Crisis* (Washington: Cato Institute, 1997), pp. 73-102.

servation.²⁸ America should learn from the mistakes of the 1970s and free water provision and consumption from regulatory control.

Mr. BARTON. Thank you, Mr. Taylor. The Chair would now recognize himself for the first 5 minutes of questions.

I am going to ask the first question to Mr. Kosmensky and to Mr. Haege, since you seem to be the technical experts in this group. What would the traditional toilet cost, the 3.5 gallon, if it were still available in the United States? I think, Mr. Kosmensky, you said these newer low flow toilets cost about \$200 more. If they were to still be widely available, what would the older more traditional capacity toilets cost today?

Mr. KOSMENSKY. I don't know what the toilets cost individually. I don't believe I made that statement. But I don't see why—

Mr. BARTON. You need to put the microphone close to you, sir.

Mr. KOSMENSKY. I am not familiar with the costs of the toilet per se.

Mr. BARTON. Who said that the newer ones cost \$200 more?

Mr. HAEGE. I did, Mr. Chairman. The newer toilets that we are talking about, 1.6 gallon toilets, you can buy one on the market today for \$79.95. You can buy a 3.5 gallon toilet, if they were still available on the market, for the same price. The difference is when we come to the vacuum flush. All toilets we are talking about in the 1.6—

Mr. BARTON. Stop just a second. On the market today you can get a water gravity flow 1.6 gallon low flow toilet for about 80 bucks.

Mr. HAEGE. That is correct.

Mr. BARTON. If they were available, you could buy the 3.5 gallon for about 80 bucks.

Mr. HAEGE. That is right.

Mr. BARTON. But does anybody, in the next panel, will the experts representing the manufacturers say that the water flow, the gravity flow 1.6 gallon toilet works?

Mr. HAEGE. I don't know. We will ask them.

Mr. BARTON. Do you think it works?

Mr. HAEGE. Well, my public tells me that it—

Mr. BARTON. Not the fancy vacuum assisted.

Mr. HAEGE. We are talking about the gravity feed toilet, 1.6 gallon, what my people, my constituents across the country tell me is no, no matter what price you pay.

Mr. BARTON. Because there is just not enough force generated by that weight of water?

Mr. HAEGE. In talking with the plumbers and talking with the manufacturers across this country, and as widely as I travel to these sites, it is a case of too soon, too quick, too much regulation. It is like the car industry. We don't have a choice now with this regulation, gentlemen. If we had a choice, we would buy what we feel confident with, and maybe in the fourth bathroom or the fifth bathroom we would put a 1.6.

Mr. BARTON. To get it to work, you can get a low flow toilet to work, but you have to jazz it up with high technology?

²⁸ Rogers (pp. 31-32), notes that irrigated agriculture, located primarily in the 19 western states, consumes four times as much water as all other consumers combined. Anderson and Snyder (pp. 8-12) conclude that the water inefficiency is far greater in that sector than any other.

Mr. HAEGE. That is right, Mr. Chairman. You have to buy what we call a vacuum flush toilet, which is a fixture that the toilet manufacturers make and they buy a component from two manufacturers in this country, and that is added onto it. It looks like a little tank. And that shoots 1.5 gallons per minute, or per flush. But it develops 70 pounds per square inch of pressure. So if the 100 ball test is used as a standard of watching how something flushes through a DWV, which is a drain waste vent, you will see all the balls go down the drain waste vent at the normal slope rate.

Mr. BARTON. The assisted low flow flush costs \$280.

Mr. HAEGE. Correct, sir.

Mr. BARTON. Congressman Rush and myself and others, we have low income constituents. They probably can't afford that extra \$200 just to get a toilet that flushes, or it is much more difficult.

Mr. HAEGE. Not only the constituents, but also the builders. When they put in multiple families, they put in hotel rooms, they can't afford it either.

Mr. BARTON. Okay. I think that is the main question that I have got right now. I just wanted to see the effectiveness.

One more engineering question. What if we took the low flow 1.6 gallon and put it on the top of the roof and then had a pipe that went down into the first floor so that when you pull the lever or push the button, you let gravity kind of help you get a little momentum up before it hit the toilet bowl?

Mr. HAEGE. I don't feel I am qualified to answer that question, but I don't want to go to that house.

Mr. BARTON. But it would have more power once it hit the bottom.

Mr. HAEGE. The power, yes. It has to do with evacuation of the drop. That is what they keep working on with these new engineering changes. They have less parameter of engineering specs on the 1.6 gravity flush toilet so they have to clean up their act there where the water drop is.

Mr. BARTON. Okay. My time has expired. The gentleman from Illinois, Mr. Rush, is recognized for 5 minutes.

Mr. RUSH. Thank you, Mr. Chairman. Right now the bill that is before us, H.R. 623, the purpose of it is to repeal the previous bill and repeal the standards. If in fact we do, if the Congress repealed this particular bill, the current bill, rather, the current law, that would introduce either States or other localities introducing the opportunities for them to either go with 3.5 standard, 1.6 standard, or whatever standard they would deem necessary, am I correct? I will ask Mr.—Mayor Kosmensky.

Mr. KOSMENSKY. They could do whatever they want. They could have it like it was before, that there was no restriction at all. You sold what the marketplace dictated. The marketplace dictated what you manufactured.

Mr. RUSH. In absence of a Federal standard, then wouldn't that place additional costs on—if each municipality or region had their own standard, wouldn't that place additional costs on manufacturers that would have to be met by the consumers? To be passed on to the consumers?

Mr. KOSMENSKY. I don't think we would have that. Is that a question to me?

Mr. RUSH. Yes.

Mr. KOSMENSKY. You wouldn't have that. You wouldn't have every State having all different kinds of restrictions on toilets. You think that they would, like before, just use the 3.5, and that was it. Everybody used 3.5.

Mr. LIEBERMAN. I just wanted to make the point that this is a very, very unpopular idea, unpopular with people at the Federal level, at the State level and local level. I am confident that if H.R. 623 is passed, it will largely die out at the State and local level as well. I point out there were some States and localities that had these laws on the books, but from my research I haven't found a single instance that the people who lived there actually supported them. These were pushed by the same special interests who later argued that we have created this patchwork, we need a Federal standard, and came to Washington. But, quite frankly, I don't see any support for a 1.6 standard at any level of government, and maybe I am wrong, maybe one or two States, maybe a dozen or so localities will do so, but that hardly seems a reason to burden all the rest of America.

Mr. RUSH. So you are saying, if I am correct, and if I am interpreting what you are saying correctly, you are saying if in fact we repeal the current law and pass H.R. 623, then there would be a standard based on the desires or the demand of the consumers?

Mr. LIEBERMAN. There may be no standard at all, other than the marketplace.

Mr. RUSH. That is what I am talking about.

Mr. LIEBERMAN. It is hard to imagine the citizens of any State putting up with a low flush toilet standard that uniquely burdens them at this point. These laws were easy to pass before the toilets hit the market, but at this point this is very unpopular. I have seen virtually little evidence of any popular support. I would like to quickly respond about those surveys that are about Tampa, I think, San Diego, Austin, Texas, and so forth.

I have taken a look at those and there are some very serious problems with them. First off, it looks as though they gave away the toilets and then asked the people how do you like your free toilet. Unfortunately, the other 99 percent of us have to pay good money for these toilets, and as far as I am aware, they didn't do a survey of us, or if they did, it wasn't included.

There are some other problems with those surveys as well. They targeted low income housing, which is nice, but many of those apartments probably had plumbing problems to begin with, and they may have done general improvements, they may have replaced 20 or 30-year-old high flush toilets that were in a bad state of repair. So it is very difficult I think to be confident in those toilet giveaway programs.

Mr. RUSH. Do you think there would be any additional costs that would be passed on to both the manufacturers and also consumers if in fact we repealed this current law?

Mr. LIEBERMAN. I would have to say that they are less than the costs that consumers are suffering now with the 1.6 mandate.

Mr. TAYLOR. If I can, Mr. Congressman, I would like to point out that consumers ought to have, in my opinion, the right to decide how much they spend for services. It may well be that these low

flush toilets, assume for the sake of argument they save consumers money. Well, we could save consumers money by banning car washes too and saying it is an aesthetic preference. You don't need to wash your car. It will save you money, it will save society resources. Isn't this Congress pro consumer? We would hesitate to do that because we have a respect for consumers purchasing their own preferences and making their own decisions, and it may well be they would be willing to pay more for a toilet that works.

Mr. RUSH. Mr. Chairman, I just have one comment. I just renovated a 100-year-old house a couple of years ago, and I remember my contractor telling me that when they installed the new toilets in my house, that in fact I was complaining about it, and he said well, you guys are the ones that made this law. So I couldn't say anything, but just to suffer the consequences so to speak.

Mr. BURR [presiding]. Would the gentleman like to sell me the old toilets?

Mr. RUSH. I have already done that.

Mr. BURR. The Chair recognizes the gentleman from Florida.

Mr. BILIRAKIS. The question is, Mr. Rush, are you satisfied with your toilets?

Mr. RUSH. Absolutely not. Absolutely not.

Mr. BILIRAKIS. Are not satisfied.

Mr. Lieberman, with all due respect, sir, the Tampa representative will be testifying after this panel is finished up. I hope they will address your particular point as to how their surveys were taken, and that sort of thing. You may be correct, and then again you may not be. I don't know. But let me ask you, can I infer from your testimony that you do not support any other national efficiency standards for energy or water such as those energy standards now in place for refrigerators and air conditioners?

Mr. LIEBERMAN. Well, I thought the first refrigerator standard was reasonably good. I don't—

Mr. BILIRAKIS. In other words, forgive me, it was okay if it is a national standard, as long as you thought it was pretty good, reasonably good.

Mr. LIEBERMAN. I am not sure—

Mr. BILIRAKIS. National uniform standard.

Mr. LIEBERMAN. The standards really didn't make all that much difference. If you look at the levels of efficiency in refrigerators, they were trending downward anyway. The first standard, what I was trying to say, was actually fairly lax and didn't make much of a difference. Now we are on a third standard and things are starting to get tight. No, I think consumers can decide for themselves in the marketplace and manufacturers responding to those demands can provide them with the products they want in the absence, in most cases, of Federal standards.

Mr. BILIRAKIS. Even in things such as refrigerators.

Mr. LIEBERMAN. Even in things such as refrigerators. We had no refrigerator standards until 1990 and we did okay.

Mr. BILIRAKIS. I was going to ask you to comment.

Mr. TAYLOR. I will jump right in there. There is a long footnote in my written remarks that I would point your attention to. The economics literature has studied the effects of these appliance efficiency standards now and there is voluminous literature that we

can refer to when attempting to judge their effectiveness. And energy economists, as opposed to policy activists, are virtually unanimous in the belief that these appliance standards have made no difference regarding gross energy demand. The main reason is something economists call the rebound effect.

If you reduce the marginal cost of a service, say the marginal cost of keeping your house cool on a hot summer day, consumers are going to consume more of that good. So by and large, what a great efficiency standard for an air conditioner is going to do is make it cheaper for me to keep my house at 68 degrees or allow me to run the air conditioner to keep my dog comfortable at a lot lower price than it might otherwise have before.

Consumers respond to pricing incentives and economists have found empirically, not when you are looking at engineering calculations, which is the way most energy activists look at these things. They calculate, well, you have this widget in your house and you are running it at the same amount, so it should have saved you X amount of money. When you are looking at empirical behavior, when you are looking at actual consumption practices, consumers tend to consume back, as it were, all of the energy we thought we saved with the efficiency mandate. So that in a nutshell is a good economic reason why most specialists in this field are very dubious about government efficiency mandates as a practical matter.

Mr. BILIRAKIS. Let me ask the mayor, Mr. Kosmenschky. Sir, you have testified in support of the legislation, you are a constituent of Joe's and I guess you better support it. But you mention though in your testimony, as I heard it, I thought I heard it, that the Home Builders has recently taken a neutral stance on the bill while issues are worked out with the plumbing manufacturers. You said something about—I think you said something about well, in lieu of further legislation, or words to that effect, I don't mean to put words in your mouth. So I guess my question is should this non-legislative approach be allowed to run its course before we consider legislating in this area once again? You know, did we make a mistake legislating in the first place in 1992? You know, I don't know. But it has been done and all of this manufacturing and what not has already taken place.

Well, so maybe you can ask the question, should this non-legislative approach be allowed to run its course, and then maybe in the time left over, in what way could you contemplate that it could be worked out among the builders and the plumbing manufacturers, et cetera? What would you sort of contemplate or see as, I guess I will use the word, compromise or working it out?

Mr. KOSMENSCHKY. I think there are things that could be done. In Europe they have—the toilet tanks have buttons on them where you can push it and get a half flush and push it and get a full flush.

Mr. BILIRAKIS. Don't we have something like that available?

Mr. KOSMENSCHKY. I have not seen any here, not to say there isn't something like that. Perhaps there is. Up to our neutral stance, which was just like 3 weeks ago, I am talking about the National Home Builders now, the manufacturers really can't have much interest in talking to us. But I understand in the last couple or 3 weeks they are coming to us and talking with the folks from our

research foundation about just exactly what you mentioned, couldn't there be some kind of a compromise.

I think that Congressman Knollenberg's bill here is really starting to put the pressure on these folks to resolve this thing, because I think they realize that we do have problems out there. I mean, we are not just sitting here to talk about the weather, we are here because we have a problem out there. I think they are beginning to realize that. I would hope that they will come to the table with some kind of compromises that will resolve the problem. I applaud, again, Congressman Knollenberg for doing that. If that brings us all to the table to resolve the situation short of new legislation, if that is what the committee wants, I applaud that.

Mr. BILIRAKIS. You have high hopes that something like that will take place?

Mr. KOSMENSKY. Yes, I really do.

Mr. BARTON. Mr. Burr of North Carolina for 5 minutes.

Mr. BURR. Thank you, Mr. Chairman. Mr. Haeger, do you or Click and Clack have a larger listenership? Do you know who Click and Clack are?

Mr. HAEGE. On NPR radio. They talk about cars. I don't talk about cars. Last year the home improvement industry was \$176.1 billion. I don't know what the car industry was, but I think there are more people that care about their toilets than they do if their car runs or not.

Mr. BARTON. I am not so sure about that.

Mr. HAEGE. I think you have a great mass transit system in this area and a lot of major areas, and they count on that to get back and forth to work.

Mr. BARTON. You ask my constituents what they think about their pickup versus their toilet, and they are going to tell you real quick they love their pickup a lot more than they do their toilet.

Mr. BURR. Both of you have large listenership, as is evidenced. Let me just make a comment. We are not here today to point out that what was done prior to us was bad legislation. It may have miscalculated what technology could do. We pulled a number out of the sky and said this is where we would like to be on water as it relates to toilets, as it relates to showers, and the ultimate judgment was by consumers, did the product work.

I came out of the appliance business before I got here. There was a big difference with the energy standards on refrigerators and air conditioners and other appliances. Those worked. Air conditioners still cooled, refrigerators still kept food at a comfortable temperature, and clearly consumers have spoken differently as it relates to toilets and some to shower heads.

Let me just ask, is there any data that proves that any water savings that has taken place is the direct result of low flow toilets?

Mr. KOSMENSKY. No. Mr. Chairman, we have to keep in mind that we only build 1 million houses a year, and if we put in something like the 1.6 in all our houses and then a survey is taken throughout the country, it will have a minuscule effect on that survey. Ninety-five percent of the houses out there do not have the 1.6. I think in all due respect to the gentleman from Florida, I don't know where they come up with those numbers on the surveys, because we just don't put that many of these in there, of the 1.6 toi-

lets. But those that we do put in, I find that we have problems with.

Mr. TAYLOR. Mr. Burr, as I mentioned, from 1970 to 1990, a date prior to passage of the standards, total water consumption declined in this country, despite growth in population and national GDP, per capita use declined in this country, and absolute water withdrawals for human purposes declined in this country. All prior to passage of these mandates.

In fact, those trends continued since passage of those mandates. When you are looking at macroeconomic data, it certainly is correct for all parties to point out water consumption is going down. But to use figures like that, as I heard in earlier comments at the beginning of these hearings, as an argument for the success of these standards, is, frankly, poppycock. It is an after the fact assertion.

The trend had been going on for a long, long time, prior to the passage of these mandates. In fact, where these figures came to my attention, a book by NYT press, a Harvard professor on this subject, there was no discussion at all of the conservation mandates having anything to do with those declines. Those declines had to do with other things in the economy, as I pointed out in my oral testimony.

As far as the specific studies that are in discussion today, I haven't seen them, so I can't comment on them. My experience in the energy arena, however, has been that estimates regarding reduced energy use are derived through engineering estimates. They are not derived through actual monitoring of actual consumer behavior with controllable test groups and the sorts of things that you would look for in other sorts of data if you were serious about studying the matter.

I can't judge these particular studies, but my hunch is, given what I know in the energy arena when it comes to efficiency in appliances, that I would be quite skeptical regarding such claims, particularly given the points that Mr. Kosmetsky just made regarding the amount of water or the amount of these devices being installed. Again as an overall matter, with agriculture in the West eating up 80 to 90 percent of water consumption, it is hard to imagine how a few new home buildings is going to affect overall trends in water consumption.

Mr. BURR. We probably know somewhere, if somebody wanted to find out the information, if they haven't already, how many toilets are installed in this country, wouldn't we?

Mr. HAEGER. There is documentation to that. About 4.3 million is a good estimate per year of toilets.

Mr. BARTON. Per year.

Mr. BURR. But in total in the country. Do we have any—

Mr. TAYLOR. We do, but it wouldn't help too much. The reason why is you could make an engineering estimate and say we have so many low flow toilets that went in last year, and that makes a total of X number of low flow toilets, and we will calculate that 1.6 gallons minus 3.5 gallons equals X number of gallons in savings and I will put a number to it. But what that doesn't do is it doesn't account for whether I had to flush it twice or three times or how many toilets I bought or anything else that might affect my water consumption behavior.

The problem we always run into in these sorts of estimates and other parts of the economy when looking at appliances is we do not measure actual consumer behavior. By and large we are making estimates based on installations of that nature——

Mr. BARTON. We know what the housing stock is and you know what the number of toilets per population is, so you got about 280 million Americans. I would estimate just off the top of my head probably existing toilets, if you include public buildings and everything, would be around 200 million. I am going to miss it a little bit, but I am not order of magnitude out of the ball park. You are adding 4.3 million a year.

Mr. HAEGE. Those are kitchen and industry bath numbers of 1999.

Mr. BARTON. Yes. So the general point is because of the addition of these low flow toilets, it is not having in and of itself a noticeable impact on water consumption, and just elementary analysis would indicate that has to be true because of the existing stock that is already there, even if they are totally used exactly as represented.

Mr. BURR. My last question, to the mayor for a second, as a home builder, do your customers come to you after you have turned over the keys and question the performance of the toilets?

Mr. KOSMENSKY. They did, but I warn them. I warn them before now.

Mr. BARTON. What if a home builder, you warned them and they say I am going to go to Canada and buy this. Are you legally allowed to install, if they provide it for you?

Mr. KOSMENSKY. Yes.

Mr. BARTON. You are allowed to do that.

Mr. KOSMENSKY. Yes.

Mr. BARTON. The gentleman's time has expired. I am going to miss the rule vote. I am just going to continue the next panel. You all can go vote and come back in time to hear some of the statements and the question period.

There may be written questions for you gentlemen, and we will get them to you. We appreciate your attendance, especially those that had to travel from out of State to come. But we are going to excuse you at this point in time and go to our next panel.

Let's hear from our second panel, or third panel actually. We have Mr. David Tippin, Director of the Tampa Water Department. Mr. Bilirakis, would you like to introduce him a little more forcefully before you leave?

Mr. BILIRAKIS. He is going to testify now?

Mr. BARTON. They are going to testify.

Mr. BURR. They may need your vote on the rule.

Mr. BILIRAKIS. I do have to make this vote. It is a rule.

Mr. BARTON. The gentleman from Florida.

Mr. BILIRAKIS. I would like to hear Mr. Tippin's testimony, Mr. Chairman. I am just not sure how to handle this.

Mr. BARTON. Okay. The problem, I have got a working group at 4:30.

Mr. BILIRAKIS. Can we skip Mr. Tippin?

Mr. BARTON. I tell you what. Apparently this is a close vote. I wouldn't assume a rule vote would be that close, but we are going to recess, and I will go do my constitutional duty and vote, and

then I will come back. It will be about 15 minutes. If you all stay in the general area so when we get back, Mr. Bilirakis especially wants to come back. We are in recess subject to the call of the Chair, which should be within the next 15 to 20.

[Brief recess.]

Mr. BARTON. The subcommittee will come back to order. There are always two sides to every story, and last but not least, we are now going to hear the other side of the issue. On this panel, as I pointed out, we have Mr. David Tippin, Director of the Tampa Water Department. He represents the American Water Works Association. We have Mr. Edward Osann, who is the President of Potomac Resources here in Washington, DC. We have Mr. George Whalen, who represents the National Association of Plumbing, Heating and Cooling Contractors. We have Mr. David Goike, who represents the Plumbing Manufacturers Institute, and we have Mr. Anthony Willardson, who is the Associate Director for the Western States Water Council.

Gentlemen, we appreciate your patience. Your statements are in the record in their entirety. We are going to give you each 5 minutes to summarize and I know Mr. Bilirakis will have some questions and I will have questions.

Mr. Bilirakis, do you wish to more formally introduce Mr. Tippin.

Mr. BILIRAKIS. Thank you, Mr. Chairman. I did want to voice my disappointment that this panel comes up and you and I are the only ones here. We have heard from the other side of the story when ordinarily it is mixed and you are going to have two and two just to keep something like this from taking place. So I am very disappointed in that regard.

I will say Mr. Tippin has a pretty tough job in our area, he is Director of the Tampa Water Department. We have big infrastructure water problems in Florida and tremendous water problems, as you might imagine, with that high water table. Mr. Tippin is I know a free enterpriser, a market oriented individual, a person who would ordinarily I think and maybe he does agree—I think he does agree with much of the testimony that you have heard today in terms of letting the market function and what not. I also know that he will share with us why what we did back in 1992 is so very important to States like Florida and so many others. I am very happy that he would take the time to come up here, probably to get out of the heat down there.

Mr. BARTON. Like it is not hot here in Washington.

Mr. BILIRAKIS. Thank you, Mr. Chairman.

Mr. BARTON. Mr. Tippin, we welcome you. You are recognized for 5 minutes.

STATEMENTS OF DAVID L. TIPPIN, DIRECTOR, TAMPA WATER DEPARTMENT; EDWARD R. OSANN, PRESIDENT, POTOMAC RESOURCES, INC.; GEORGE V. WHALEN, NATIONAL ASSOCIATION OF PLUMBING, HEATING, COOLING CONTRACTORS; DAVID GOIKE, MASCO CORPORATION, REPRESENTING PLUMBING MANUFACTURERS INSTITUTE; AND ANTHONY WILLARDSON, ASSOCIATE DIRECTOR, WESTERN STATES WATER COUNCIL

Mr. TIPPIN. Good afternoon, Mr. Chairman, and Congressman Bilirakis, and thank you for inviting me here. I am David L. Tippin, Director of the Tampa Water Department. I was there as a temporary job 25 years ago and have been there ever since. I am a registered professional engineer. I want to testify on behalf of the city of Tampa, the American Water Works Association and the Association of Metropolitan Water Agencies, whose combined membership provides drinking water to approximately 90 percent of the American people.

The city of Tampa and American Water Works and AWWA support the current plumbing products efficiency standards in the 1992 Energy Policy and Conservation Act. It has worked as intended. The new low flush toilets work and are of high consumer acceptance. I think some of the video that you saw earlier, that data is very old. I think it is more than 2 years old on some of the information and staff that were shown there earlier today.

A new AWWA research study shows that the double flushing in new low flush toilets is the same or better than the nonlow flush toilets. In my own home I have a low flush toilet and I have a 3.5 gallon toilet, so I feel that I am an expert on toilet flushing in Florida.

In mine there is no difference, only that the 1.6 saves a lot more water than the 3.5 flush toilet.

Mr. BARTON. You said there is difference?

Mr. TIPPIN. Both of them work equally well. The May 1998 Consumer Reports shows that the new low flush toilets work. I think most of you have seen this, and I won't go into that.

To date in Tampa as an incentive we have given over 15,000 toilet rebates in 11,000 households. It is not a free toilet, we give a hundred dollar rebate and the money comes from add-on taxes and also our rates, and that is how we fund the rebates as an incentive. We think that we have saved about 150 million gallons of water per year from the rebate programs, not counting the additional low flow toilets in our new homes.

The Tampa area is an exploding area as far as new home building is concerned. There are good toilets and bad toilets. Just like you get good American cars and Yugos, it varies. And the new toilets work. You can go to home supply centers, they are inexpensive. I know of ones in Tampa that I go to every Saturday morning, they work.

The customer satisfaction surveys show high approval ratings on the new low flush toilets, and in Tampa our studies show that 90 percent of our customers that have these toilets were satisfied or very satisfied. And in other cities, I think in Austin, Texas, for one, it rose to 95 percent. In water savings, which benefit the customer, the economy and the environment, are enormous. You have to look

at the total water cycle here, not only the water supply. You have to look at waste treatment. The cost of waste treatment is very high now, I know that it is in Florida, and I would presume so in the other States in the country, too. So water conservation should be looked at as the total water picture.

The efficient plumbing fixtures installed in 1998 in the United States will save about 16 billion gallons of water in 1999, enough to fill 1.2 million olympic sized swimming pools. That is 16 billion gallons.

And I would like to offer into the record letters of support from the mayor and the commissioners of the city of Portland, Oregon. Also from the largest public water supply, the Metropolitan District of Southern California, and also the city of Los Angeles, as part of the record. So I will hand—

Mr. BARTON. I am sorry, I was listening to staff. Is there a unanimous consent request?

Mr. BILIRAKIS. He wanted letters in support of the standards.

Mr. BARTON. Let the majority and minority staffs look at them. If there is no objection, they will be entered, but we want to give especially the minority an opportunity to look at the letters. That is just kind of a standard practice.

[The information referred to follows:]

CITY OF PORTLAND, OREGON
BUREAU OF WATER WORKS
July 23, 1999

The Honorable JOE BARTON, *Chairman*
Subcommittee on Energy and Power
Committee on Commerce
U.S. House of Representatives
Washington D.C. 20515

The Honorable RALPH M. HALL, *Ranking Member*
Subcommittee on Energy and Power
Committee on Commerce
U.S. House of Representatives
Washington D.C. 20515

DEAR MR. CHAIRMAN AND RANKING MEMBER: The City of Portland has reviewed HR 623 and commends Rep. Knollenberg for monitoring the implementation of the Energy Policy and Conservation Act, and we thank you for holding a hearing on this matter and receiving public comment. The City of Portland was involved in supporting the amendments to the Act in 1992 which required water efficient plumbing fixtures and we have been monitoring the implementation as well. We believe the federal requirements and the nationwide consistency they bring are far superior to the prior situation which left it to the states to decide on their own standards. We have monitored the manufactured goods which are being produced as a result of the federal law and believe them to be reliable and effective in saving water.

The City of Portland provides high quality drinking water to almost one-third of the State of Oregon. We are in a high growth area and must plan for additional water supply. We are also the first urban area to have fish listed on the Endangered Species List on rivers inside the City of Portland. Conservation is one of the important tools we can use to meet water supply and environmental protection. There are significant water savings being realized through the federal plumbing standards; the fixtures work well, and we believe it is important for the current federal standards to remain in place. We are pleased there is a public hearing on this bill so that Congress can have current information on the effectiveness of the plumbing fixtures. However, we do believe the fixtures on the market work well, and there is customer acceptance and support for water efficient fixtures. We know these fixtures are saving water, and they are saving customers money on their water bill. As elected officials of the City of Portland responsible for both water supply and for issuing build-

ing permits and conducting plumbing inspections we believe there is no compelling need for HR 623.

Sincerely,

VERA KATZ, *Mayor*
ERIK STEN, *Commissioner*
JIM FRANCESCONI, *Commissioner*
CHARLIE HALES, *Commissioner*
DAN SALTZMAN, *Commissioner*

LOS ANGELES CITY COUNCIL
OFFICE OF THE CHIEF LEGISLATIVE ANALYST
July 26, 1999

The Honorable JOE BARTON
Chairman, Energy and Power Subcommittee
2125 Rayburn House Office Building
Washington, D.C. 20515

DEAR CHAIRMAN BARTON: The City of Los Angeles is strongly opposed to H.R. 623, the Plumbing Standards Improvement Act of 1999.

Sponsored by Representative Joe Knollenberg, H.R. 623 would repeal language in the Energy and Policy and Conservation Act of 1992 that requires newly manufactured toilets and shower heads to meet specific water efficiency standards.

Water conservation efforts have been—and continue to be—a vital tool on preserving limited water resources in California. Unfortunately, H.R. 623 would seriously undermine such efforts.

The current national efficiency standards, combined with water conservation campaigns at the local level, have played a key role in encouraging the greater use of water efficient devices in homes and businesses alike. In recent years, the City's Department of Water and Power (DWP) has been actively involved in conservation activities aimed at reducing both in door and out door water use. DWP's ultra-low flush toilet and low-flow shower head retrofit programs save an estimated 35,000 acre-feet of water annually. This is enough water to meet the needs of 70,000 families each year.

Preserving the current national efficiency standards for newly-manufactured toilets and showerheads makes good economic and environmental sense. If you have any questions, please feel free to contact me or John Ryan at (202) 347 0915

Sincerely,

JAMES F. SEELEY

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
OFFICE OF THE GENERAL MANAGER
July 22, 1999

The Honorable JOE BARTON
Chairman
United States House of Representatives
2125 Rayburn House Office Building
Washington, D.C. 20515

DEAR CHAIRMAN: H.R. 623, a Bill to Amend the Energy Policy and Conservation Act to Eliminate Certain Regulation of Plumbing Supplies (Rep. Knollenberg, R)

The Metropolitan Water District of Southern California (Metropolitan) wishes to join the Association of California Water Agencies in expressing opposition to H.R. 623, the proposed repeal of water-efficient plumbing fixture standards established by the U.S. Energy Policy Act of 1992.

As the major wholesale supplier of water to cities and counties within the arid, drought-prone Southern California region, Metropolitan is a recognized pioneer and an aggressive proponent of water conservation programs and policies. Since 1988, Metropolitan, in partnership with its 27 member agencies, has invested more than \$200 million to co-fund projects designed to increase water use efficiency in the residential, commercial, industrial, institutional and public sectors.

By adopting uniform efficiency standards, the Energy Policy Act of 1992 (EPA) provided manufacturers with a national market and encouraged competition. Large volume purchases of ultra low-flush toilets (ULFTs) by Metropolitan and others, during the early 1990's, helped provide the economic incentives manufacturers needed to incur the substantial engineering and re-tooling investments required to meet the challenge of producing an acceptable 1.6 gallon per flush toilet. Metropolitan be-

lieves the withdrawal of national standards would substantially undermine this highly desirable and beneficial trend.

Metropolitan appreciates your continued interest in the water issues that affect California. If you have any questions, please feel free to call me at (213) 217-6211, or Brad Hiltcher in our Washington Office at (202) 296-3551.

Sincerely,

RONALD E. GASTELUM
General Manager

Mr. TIPPIN. That is fine. Representative Knollenberg is to be commended on introducing legislation which focuses attention on the problems with the early generation.

Mr. BARTON. I think I heard your bell expire. So could you summarize.

Mr. TIPPIN. In summary, the objectives of H.R. 623 have been met through the marketplace, and there is no need for legislation and we respectfully request that the members of the subcommittee not support the passage of house resolution 623.

[The prepared statement of David L. Tippin follows:]

PREPARED STATEMENT OF DAVID L. TIPPIN, DIRECTOR, TAMPA WATER DEPARTMENT, REPRESENTING THE AMERICAN WATER WORKS ASSOCIATION, AND ASSOCIATION OF METROPOLITAN WATER AGENCIES

INTRODUCTION

Good afternoon Mr. Chairman. I am David L. Tippin, Director of the Tampa Water Department in Tampa, Florida, a position I have held for 25 years. I am here today on behalf of the City of Tampa, the American Water Works Association (AWWA), and the Association of Metropolitan Water Agencies (AMWA).

We appreciate the opportunity to present our views on H.R. 623, The Plumbing Standards Improvement Act of 1999.

Tampa, Florida's third largest city, provides water to 450,000 people in a 211 square mile service area. This area of Florida is densely populated with a staggering annual growth.

AWWA is the world's largest and oldest scientific and educational association representing drinking water supply professionals. The association's 56,000 members are comprised of administrators, utility operators, professional engineers, contractors, manufacturers, scientists, professors and health professionals. The association's membership includes over 4,200 utilities which provides over 80 percent of the nation's drinking water. Since our founding in 1881, AWWA and its members have been dedicated to providing safe drinking water.

AMWA is an association of the nation's largest public water supply agencies. Its 136 members provide water to over 120 million people and the purposes of the association are to work for the advancement and protection of drinking water supplied by large public agencies.

In today's statement I would like to emphasize the importance of the current plumbing products efficiency standards in the 1992 Energy Policy and Conservation Act (PL 102-486) both to the Nation and in Florida in particular.

PLUMBING PRODUCTS EFFICIENCY STANDARDS

The City of Tampa, AWWA, and AMWA respectfully request that the members of the Subcommittee not support the passage of H.R. 623, which will repeal a requirement in the 1992 Energy Policy and Conservation Act (PL 102-486) that restricts all new toilets to 1.6 gallons per flush and showerheads to 2.5 gallons per minute among other water conservation standards. A number of things have changed since the proposal in H.R. 623 was first introduced in the 105th Congress in H.R. 859.

—**The toilets work.** The once controversial water-saving toilets are no longer an issue with consumers. The plumbing products industry has met consumers' needs by engineering a new generation of water-efficient toilets that work as well as, or better than, the older pre-water-saving models according to a 1998 Consumers Union study and numerous consumer satisfaction surveys.

—**Water and economic savings are enormous.** Efficient plumbing fixtures installed in new homes last year will save 16 billion gallons of water in 1999—enough to fill 1.2 million olympic-sized swimming pools. The cost avoidance for

additional infrastructure and the benefit for growth and development without adversely affecting natural resources is an enormous economic and environmental benefit of these savings.

Rep. Knollenberg is to be commended for introducing legislation which focused public attention on the problems with an early generation of water efficient toilets which were of concern to consumers. The public debate on this issue has highlighted the improvements in water efficient toilets made by the plumbing products industry and the water and economic benefits of the current standards. There no longer is a need for this bill to help improve water efficient plumbing products for consumers. The objective of H.R. 623 has been met through the rigors of the marketplace which may drive even further improvements in the performance of plumbing products.

However, the regulatory stability provided by current Federal law is important to the U.S. plumbing industry. It allows them to bring improved products to a national market, rather than spend time and money on designing products for differing flush volumes, flow rates, test procedures, certification requirements, and labeling rules, all of which could vary by state and local jurisdictions if Federal standards were repealed. Economies of scale—an important factor in keeping costs to consumers low—could be lost if the national market were to become fragmented. Prior to enactment of the 1992 Energy Policy and Conservation Act, 17 states as well as numerous localities had adopted their own plumbing products standards. This led to not only manufacturing and distribution problems, but also created enforcement problems within the states.

This issue was debated in 1992 and a bipartisan agreement among Members of Congress and the stakeholders to adopt national standards was incorporated into law. While a different legislative approach which would provide for another mechanism to establish national standards might have been adopted in 1992, it was not. It would be highly counter-productive, after all this time, to repeal these standards on which the manufacturing of plumbing products in the United States is based. In many cases, the new and efficient plumbing products are a cornerstone for the local water conservation programs of public water utilities which avoid the cost to consumers of new reservoirs and both drinking water and waste-water treatment facilities.

WATER SAVINGS NATIONALLY

Water suppliers in the United States already process nearly 34 billion gallons of water each day. If the population—and therefore demand—continues to grow, saving water can help avoid building expensive new water supply and treatment facilities that would put an additional stress on the environment and increase water rates for consumers. According to the 1998 Residential Water Use Summary commissioned by AWWA, average water use in the typical single-family home is 74 gallons per capita per day. By installing water-efficient fixtures, however, consumers can cut their water use by 30 percent to 51.9 gallons per capita per day. This can save households up to \$100 each year.

The water savings from coast to coast are enormous. Since 1993, Tampa has provided 15,000 toilet rebates. On a larger scale, the City of Los Angeles and local water agencies have provided rebates or given away more than 2.25 million low-flush toilets since 1992. Despite a population increase of nearly one million since 1970—a jump of 32 percent—Los Angeles in 1999 used virtually the same amount of water as it did 29 years ago. Retrofitting toilets in Los Angeles saves nine billion gallons of water a year. Due to conservation measures, Southern California's need for imported water has been reduced by 710,000 acre-feet annually, or about 23 percent. At the other end of the country, in New York City, more than 1.3 million inefficient toilets were replaced with low-flush toilets between 1993 and 1997. Although the city's population continues to grow, per capita water use in New York City dropped from 195 gallons to 164 gallons per day from 1991 to 1997. The New York Department of Environmental Protection estimates city-wide savings from low-flow toilets to be 70 to 80 million gallons per day. In apartment buildings using low-flow toilets, there was a 29 percent reduction in water use. In Denver, as part of the resource planning process, the Denver Board of Water Commissioners identified a need for an additional 100,000 acre-feet of water annually to meet total demand by 2045. Denver Water is committed to obtain 29,000 of the 100,000 additional acre-feet through water conservation. Denver Water is counting on achieving some of these saving through the requirements in the 1992 Energy Policy and Conservation Act.

Double flushing is no longer a problem and the low-flush toilets are producing the water savings intended in the 1992 Energy Policy and Conservation Act. In a soon to be released study, *Residential End Uses of Water*, the AWWA Research Founda-

tion has found that, even in instances of double flushing, the slightly higher flushes per day did not offset the volume of water used by the larger volume flush toilets. Further, the study stated that, on average, double flushing of low-flush toilets does not appear to happen any more often than double flushing of non-low-flush toilets. Any additional flushing was not often enough to even begin to offset the water savings available from the low-flush toilets. The great majority of low-flush toilet owners surveyed are now satisfied with the performance of the toilets. As examples, in a low-flush toilet program in Tampa, 91 percent of the customers were either satisfied or very satisfied with the new low-flush toilets, and in a similar program in Austin, Texas, 95 percent of the customers were either satisfied or very satisfied with the new low-flush toilets. The May 1998 issue of Consumer Reports reported that the newer low-flush toilets tested worked well.

America's public water supply systems continue to use more and more water. Total withdrawals have nearly tripled since 1950. The cost of water and wastewater treatment has gone up significantly in recent years. Americans now spend about \$50 billion each year on residential water and sewer bills. Water conservation can help reduce residential water bills not only through reduced water use but through avoidance of capital expenditures as well. The Environmental Protection Agency needs survey for both drinking water and wastewater estimates that at least \$280 billion will be needed to protect public health and accommodate growth over the next 20 years. A significant portion of this need is for facilities and equipment where the volume of water and wastewater flow affects the required size and cost. Water conservation programs can postpone or reduce the cost of such capital spending.

WATER SAVINGS IN FLORIDA

The Tampa area receives about 55 inches of rainfall per year. However, about 49 of those inches are lost to run-off and evaporation, resulting in a true effective rainfall of only about six inches. Most of the rain occurs in July, August and September. Conversely, Tampa water supplies are quite stressed during our annual drought cycle—making conservation critical. The plumbing products standards of the 1992 Energy Policy and Conservation Act are an essential component of water conservation and repealing these standards will only exacerbate existing problems. In addition, repealing the current Federal plumbing products standards is detrimental to the long-term health of the Floridian economy. Florida is one of the fastest growing states in the country. Each new resident and business places increasing demand on a relatively static supply of potable water. Water conservation is one way that we can meet the needs of new residents and businesses while stretching the limited supplies of water available. Without national standards, Florida would be forced to adopt its own state standards which could put Florida in an economic competitive disadvantage with other areas and cost Florida consumers more for water efficient plumbing products.

Tampa has found that indoor water use, by using water savings fixtures, can be reduced by 15 percent or about 14,000 gallons per year per household.

SUMMARY

In conclusion, I want highlight the main points of the testimony:

- The City of Tampa, AWWA, and AMWA support the current plumbing products efficiency standards in the 1992 Energy Policy and Conservation Act. It has worked as intended.
- The new low-flush toilets work and have high consumer acceptance.
- The water savings which benefit the consumer, the economy and environment are enormous.
- The objectives of H.R. 623 have been met through the market place and there is no need for legislation.
- We respectfully request that the members of the Subcommittee not support the passage of H.R. 623.

This concludes our statement on H.R. 623, The Plumbing Standards Improvement Act of 1999. I would be pleased to answer any questions or provide additional material for the committee.

Mr. BARTON. Thank you, Mr. Tippin. Mr. Osann, we recognize you for 5 minutes.

STATEMENT OF EDWARD R. OSANN

Mr. OSANN. My name is Edward Osann. I am of Potomac Resources, and this testimony is presented on behalf of 10 national and State environmental organizations, as well as the National Association of Service and Conservation Corps, and the California Urban Water Conservation Council. I am sure that it will come as no surprise to you, Mr. Chairman, we could not disagree with Mr. Knollenberg more on this legislation. We are——

Mr. BARTON. You need to move the microphone over. You could not disagree more?

Mr. OSANN. We could not disagree more. As this hearing takes place, there are severe drought conditions which are extending across a dozen or 14 eastern and southeastern States and portions of Texas, as I am sure you are aware, remain dry and have not recovered from last year, particularly in the Rio Grande Valley. These water use restrictions that result from these conditions highlight the value and continuing importance of saving water. But as severe as some of these problems are locally, the Federal interests, the national interest in water conservation in general and plumbing product efficiency in particular is really much broader than that. It stems from the fundamental reality that it takes money to provide safe drinking water, and it takes money to clean up waste water.

The financial needs that have been projected by the States and reported by EPA are so enormous over the coming decades, some \$280 billion will be needed to comply with current law and accommodate growth over the next 20 years, that these costs threaten to frustrate or delay achieving important public health objectives and environmental quality goals. Many of the organizations that I am representing here today work to enact or to strengthen the Safe Drinking Water Act, to enact or strengthen the Clean Water Act. If the cost of compliance with these statutes were to appear to be unmanageable, it might threaten the achievement of the goals, goals which we believe are broadly supported by the American people.

Efficient plumbing products help communities and consumers to manage their water and sewer costs, and this is good for the environment. The value of this is apparent in many places that we don't usually think of being as arid or being short on water. Congressman Dingell alluded to the concerns regarding waste water in the State of Michigan and my testimony indicates across—gives examples of infrastructure needs through the water rich parts of the country, areas that we don't usually think of as being subject to water shortages, but the dollar requirements are significant and these products because they save significant amounts of water are very useful tools for managing these costs.

By significantly reducing indoor water use, efficient plumbing products can help hold down the cost of water supply and waste water treatment infrastructure in all 50 States in a highly cost effective manner, and we think the Federal interest is clearly demonstrated here by the establishment of Federal environmental goals and the Safe Drinking Water Act and the Clean Water Act and the Federal financial interest that is evidenced by multi-billion dollar appropriations for State revolving funds and rural water and

sewer programs to finance both drinking water and waste water treatment improvements. We think that there is a strong Federal interest in maintaining efficiency standards for plumbing products that can save consumers money and facilitate improvements of these important public health and environmental objectives.

In many communities there are special efforts that are underway to use efficient plumbing products to accomplish local and regional environmental goals. In some cases it is maintaining riparian habitat and restoring fisheries, and in others it is improving the quality of waste water discharges.

My written testimony provides a list of examples where conservation programs are addressing water needs and environmental objectives and conservation programs that are using water efficient products.

Thank you, Mr. Chairman.

Mr. BARTON. If you have another sentence or two—

Mr. OSANN. I would simply point out that many States have found water efficient plumbing to be critically important for their future infrastructure planning and with that achievement of environmental goals that the American public values highly.

Attached to my testimony is a narrative description from the Texas Water Development Board that describes the role of water efficient plumbing products in Texas and the significant reliance on these products over the coming decades that the State perceives, and I simply call that to your attention, Mr. Chairman.

[The prepared statement of Edward R. Osann follows:]

PREPARED STATEMENT OF EDWARD R. OSANN, PRESIDENT, POTOMAC RESOURCES, INC.

My name is Edward R. Osann, and I am President of Potomac Resources, Inc., a consulting business specializing in energy and natural resources policy. Over the past two years, I have served as a legislative representative on the issue before the subcommittee today on behalf of plumbing manufacturers, environmental organizations, and water and wastewater utilities.

My testimony today is endorsed and presented on behalf of the following organizations, whose principal interests involve the conservation and wise use of natural resources, the protection of environmental quality, and public education regarding such issues: the American Council for an Energy-Efficient Economy, Clean Water Action, Environmental and Energy Study Institute, Environmental Defense Fund, Friends of the Earth, National Wildlife Federation, Natural Resources Defense Council, Sierra Club, Texas Committee on Natural Resources, and the Union of Concerned Scientists.

This testimony is also presented on behalf of the:

- National Association of Service & Conservation Corps, a membership association for 100 conservation corps in 34 states who provide employment and training for young adults. Several of these corps work with utilities and municipalities on water conservation projects; and the
- California Urban Water Conservation Council, an organization established in 1991 to advance the analysis and implementation of urban water conservation measures in California, and whose decision making is shared evenly between the its water agency members and its non-profit public interest group members.

Water conservation is important to the nation.

Mr. Chairman, as this hearing convenes, a band of states extending from Massachusetts to North Carolina is experiencing severe drought conditions, and portions of Texas have seen little relief from last year's severe heat and dry weather. The water use restrictions that result from these conditions serve to highlight the continuing importance of making efficient use of our water resources.

But as severe as some of these local water supply problems have become, the national interest—indeed, the federal interest—in water conservation in general, and plumbing product efficiency in particular, is much broader than that. It stems from the fundamental reality that in all 50 states, it takes *money* to provide safe drinking

water, and it takes money to clean up wastewater. The financial needs are so enormous—according to EPA and the States, some \$280 billion will be needed to comply with current law and accommodate growth over the next 20 years—that these cost threaten to frustrate or delay the achievement of important public health objectives and environmental quality goals.

Admittedly, water conservation is seldom a “top of the mind” concern in water-rich portions of our country. But consider this: States throughout the Northeast and Midwest have multi-billion-dollar infrastructure needs. In many cases, these are for facilities and improvements whose costs are related, at least in part, to the volume or flow of water or wastewater that must be accommodated. This is where water conservation can translate into real dollar savings.

To illustrate, these needs over the next two decades have been projected by the States themselves and EPA for portions of the country that we don’t usually consider to be “arid”:

Iowa	drinking water transmission	\$1.2 billion
Michigan	drinking water transmission	1.4 billion
Ohio	drinking water transmission	1.4 billion
Pennsylvania	drinking water treatment	1.3 billion
Illinois	drinking water treatment	1.5 billion
New Jersey	wastewater secondary treatment	2.0 billion
North Carolina	wastewater advanced treatment	1.1 billion
Michigan	combined sewer overflow	3.7 billion
Ohio	combined sewer overflow	4.2 billion
Illinois	combined sewer overflow	9.4 billion

In fact, four out of the top six states ranked by their total flow-related drinking water and wastewater infrastructure needs are Great Lakes States—New York, Illinois, Ohio, and Pennsylvania—joined by California and Texas. (See attachment on Texas infrastructure needs.)

By significantly reducing indoor water use, efficient plumbing products can help hold down the costs of water supply and wastewater treatment infrastructure in all 50 States, in a highly cost-effective manner. In light of—

- the federal interest in meeting safe drinking water needs and achieving water quality goals, as reflected in the Safe Drinking Water Act and the Clean Water Act; and
- the federal financial interest evidenced by multi-billion dollar appropriations for State Revolving Funds and rural water and sewer programs to finance both drinking water and wastewater treatment improvements,

there is a strong federal interest in maintaining efficiency standards for plumbing products that can save consumers money and facilitate the achievement of these important public health and environmental objectives throughout the nation.

Water conservation is helping to protect the environment today.

Increasingly, water conservation plays an important role in meeting the environmental goals of many states and communities, in addition to lowering costs and improving the reliability of water and wastewater systems. Water conservation programs, including those featuring efficient plumbing products, can be structured to achieve any of the following—

- Maintaining riparian habitat and restoring fisheries;
- Protecting groundwater supplies from excessive depletion and contamination;
- Improving the quality of wastewater discharges;
- Restoring the natural values and functions of wetlands and estuaries;
- Reducing energy consumption and related air pollution.

There are many examples of conservation programs addressing these problems. Here is a brief sample of such activities.

In Washington... Puget Sound and its tributary streams have already benefitted from conservation-assisted improvements in water quality. These programs are soon to be expanded to address the special needs for stream habitat restoration necessary for salmon restoration under the Endangered Species Act.

In Texas... Ambitious water conservation programs are helping to address the special needs of endangered species that are threatened by excessive groundwater use in the San Antonio and Austin areas. The Edwards Aquifer Authority was created to help stabilize and restore groundwater resources, and improved plumbing efficiency has been a significant element in the restoration program. Statewide, the 1997 Texas Water Plan projects that water conservation will produce ⅓ of all new supplies needed in the state by 2050, and that improved plumbing efficiency will

constitute $\frac{1}{3}$ of all conservation savings. (See attachments from the Texas Water Development Board.)

In California... Several federal agencies are currently working with the State of California on the CALFED Bay-Delta Program, designed to restore ecological health and improve water management in California's San Francisco Bay/Sacramento-San Joaquin Delta Estuary. The CALFED Bay-Delta Program has proceeded with a recognition that efficient use of water is vital to the continued health of California's economy, the reliability of water supplies for urban and agricultural users, and the restoration of ecological health. Programs to ensure the use of efficient plumbing fixtures in new construction, and encourage the replacement of older inefficient fixtures, are among the most important and most successful urban water conservation programs. California relies on existing state and federal plumbing standards, as well as local incentive programs, to replace older fixtures, as essential elements of statewide efforts to guarantee a reliable future water supply and a healthy Bay-Delta ecosystem. The estimated potential urban water conservation savings of the program through 2020 are significant, between 1,800,000 and 2,125,000 acre-feet. A significant portion of these savings comes from installing 1.6-gpf toilets and efficient showerheads.

In New York City... In order to improve the quality of wastewater discharges at chronically overloaded sewage treatment plants, New York City embarked on one of the largest water conservation programs in the nation. An ambitious program to install water meters at each unmetered residential account was begun in 1988, resulting in the installation of over 500,000 water meters. In 1994, the City launched its Toilet Rebate Program, through which 1.3 million inefficient toilets were replaced with 1.6-gpf units of the building owners' own selection. Since the beginning of the rebate program, both water consumption and wastewater inflows have dropped dramatically, even while the city's population has grown. Current dry-weather flows to the city's sewage treatment plants now average 1,266 million gallons per day (mgd), which contrasts with flows of 1,530 mgd in 1994, a reduction of 17% in five years. Currently all 14 of the city's treatment plants are operating within their design capacity, and the additional retention time made possible by reduced inflows has resulted in higher quality effluent.

In the District of Columbia... The Washington Metropolitan Area is served by the Blue Plains regional wastewater treatment plant, which recently underwent a costly expansion of capacity. Nevertheless, Washington, DC, is using more than its share of capacity of the plant, which was built to serve neighboring suburban jurisdictions as well. In order to meet its contractual obligations to its suburban partners and maintain the plant's performance, Washington will undertake a water conservation program designed to shave 20 mgd from the inflows to Blue Plains. A variety of measures are under evaluation, with efficient plumbing fixtures likely to be a major component of the program. These measures will play an additional important role as the city develops plans to reduce long-neglected combined sewer discharges into the Anacostia River.

In Florida... Perhaps the largest wetlands restoration program ever undertaken, the Everglades Restoration Plan will involve major reductions in wastewater discharges to the ocean, and a redirection of conserved water to the Everglades and Florida Bay estuary on a massive scale. Because the water distribution system in South Florida must serve both the human demands for water and the environmental needs of the Everglades, the Everglades Restoration Plan recently submitted to Congress addresses both these needs. According to the plan's projections, the population in South Florida is expected to double in the next fifty years, or an increase of roughly 6 million people. The plan therefore relies on a water conservation program for South Florida that would reduce consumption by 17% over the life of the plan, dropping water consumption from 1,449 mgd down to 1,193 mgd. These reductions are roughly equal to the increase in the amount of water that the Restudy Plan will provide for Everglades National Park (about 270,000 acre-feet per year). In dry years, that is more than half of the water flowing into the Park. These reductions depend on full use of 1.6-gpf toilets in the project area.

Enactment of H.R. 623 would be costly, unnecessary, and counterproductive to the protection of the environment.

For the reasons outlined above, the nation can ill afford the additional cost that would inevitably result from enactment of H.R. 623. With some 35 million 1.6-gpf toilets now installed all across the United States, this new water-saving technology has become an important factor in the achievement of long-sought environmental goals. American communities and consumers are saving money, and good product performance is being recognized in the competitive marketplace. *Consumer Reports* has referred to the bill as "unwarranted," and we fully agree.

We view H.R. 623 as an impulsive attack on an environmentally beneficial statute that is working well and costing little. Any advancement of this bill could only be seen as a return to the ideologically driven assaults on environmental laws that were loudly undertaken in Congress in the mid-90's, but soundly rejected by the American people. We urge you NOT to approve H.R. 623.

Mr. BARTON. We would now like to hear from Mr. Whalen, who is representing the plumbing, heating and cooling contractors for 5 minutes.

STATEMENT OF GEORGE V. WHALEN

Mr. WHALEN. Good afternoon, Mr. Chairman and members of the committee. I am George Whalen, and I am here today on behalf of the Plumbing Heating Cooling Contractors National Association, and I thank you for the opportunity to present my testimony.

I am here today to speak in opposition to H.R. 623. For 37 years I have served as the President and Executive Director of the Plumbing Foundation of the city of New York, a trade association representing contractors, unions and wholesalers and sanitary engineers.

The city of New York rebate and retrofit program. While at the foundation I had the opportunity to work with the New York City Department of Environmental Protection to develop and implement the largest and most successful toilet rebate and retrofit program in the Nation. This program has been a resounding success with residents, building owners and managers, the plumbing industry, the city's water purveyors, local, State and Federal officials.

New York City has long been recognized as having one of the most successful water supply systems, both in terms of quality and quantity. That supply, however, was not infinite, and beginning in 1991, the city recognized the need to protect its water resources. High usage and summertime drought conditions had forced the city's reservoirs to dip dangerously low and had placed unreasonable demands on both the city's clean water needs and its capacity to treat waste water. It is important to remember that each gallon of water consumed equals at least a gallon of water that needs to be treated by one of the city's 14 sewage plants, 4 of which at the time were operating at or above capacity. At that time the estimate for upgrading the city's waste water treatment capacity to meet current and future needs was expected to cost more than \$10 billion in State and Federal money.

The city was not alone in experiencing increased water usage, and wondering how it would meet the rising costs of waste water treatment, and finding clean potable water wasn't the biggest problem.

I personally have worked on projects for California, Florida, Maryland and Massachusetts as well as Cities of Philadelphia, Atlanta, Duluth, Minnesota and Portland, Oregon, all of which were facing stresses on their ability to meet their waste water treatment needs. In fact, some areas of the country, including New York City, were threatening building moratoriums in order to reduce waste water treatment demands. Tapping into new water sources was unjustifiably expensive and would not address the city's long term environmental needs. The city needed a solution that would address both challenges, reducing the city's demands for clean water and reducing the amount of water needing treatment. Prior to the

1990's, the majority of the New York City's toilets used 3 to 5 gallons of water per flush. And in fact prior to 1980, you could use a toilet in the United States with $4\frac{1}{2}$ to 7 gallons of water. There were 4 million toilets in the city of New York, and the frequency at which they were flushed, very quickly you realize the amount of water being consumed is no longer insignificant.

The toilet rebate and retrofit program eventually adopted by the city was an innovative and effective plan that would address the city's clean water and waste water treatment needs. The terms of the program were simple. The city offered a rebate up to \$240 on the installed cost for the replacement of an outdated water guzzling toilet with a modern, low-consumption toilet. Additional replacements in the same household were eligible for \$150 rebate per unit. Commercial replacements qualified for \$150 per unit. A couple of caveats, and these were the things that ensured the program's success. At least 70 percent of the toilets in each building had to be replaced before the owner was eligible for the rebate. Only models tested and approved by the State of New York could be installed. And most importantly, the installation must be completed by a licensed plumbing contractor who could not get paid if the unit did not work.

This public-private partnership succeeded because of the credibility of the program among the city's building owners and the licensed plumbing contractors working in the city's 2.3 million households. It could not have worked without their support.

I would like to share some impressive facts. We did 1.3 million plus toilets in the first 25 months on the program at an average of 12,500 a week. The city of New York had reduced the flow of water through its sewage treatment plants by 80 million gallons a day, 280 million gallons a year. New York City replaced 1.3 million toilets at a cost of \$290 million, but saved the city \$3 billion in water and waste water treatment expansion costs. The average household in New York City was saving \$70 annually on its water and sewer bills, which are combined. Water consumption was reduced by 29 percent.

I would say in conclusion, gentlemen, we were going to go on and do the rest of the 4 million toilets, and as Mr. Giuliani came in, everybody started saying we don't have to save 240 million gallons of water. So they stopped it at 1.3 because there wasn't a need for it. We have held back the other 2.7—or the other 1.7 or 2.7 as a reserve. But this was all attributable directly, I have with me and I would leave for your staff to look at an outside evaluation of the New York City toilet program, which is voluminous to say the least, and it shows almost all of the toilets that were installed and the consumer's response to that and I think more importantly when I say to you very frankly the plumbing installer in New York City did not get paid from the administration if the consumer said hey, that thing doesn't work. So in fact we did it in Federal office buildings, Marriott hotels, houses, a cross-section of the city. This thing works. They saved 80 million gallons a day.

Mr. BILIRAKIS. I ask unanimous consent that document be made part of the record.

[The information referred to follows:]

**EVALUATION OF NEW YORK CITY'S
TOILET REBATE PROGRAM**

**CUSTOMER SATISFACTION SURVEY
FINAL REPORT**

Prepared by:

Westat, Inc.
1650 Research Boulevard
Rockville, MD 20850

Prepared for:

New York City Department of Environmental Protection
Contract: WEC-EVAL94

December 16, 1996

TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
1	INTRODUCTION	1-1
	1.1 Objectives	1-1
	1.2 Overview of Survey Report.....	1-1
2	SURVEY METHODOLOGY	2-1
	2.1 Sample Design and Frame Development.....	2-1
	2.2 Methodology	2-4
	2.3 Data Preparation	2-5
3	SURVEY FINDINGS	3-1
	3.1 Response Rates.....	3-1
	3.2 Toilet Customer Satisfaction Rating Scale.....	3-4
	3.3 Customer Satisfaction Ratings	3-7
	3.4 Frequency of Double Flushing	3-17
	3.5 Frequency of Clogging.....	3-22
	3.6 Rootering Problems	3-25
	3.7 Frequency of Cleaning	3-26
	3.8 Frequency of Mechanical Problems.....	3-29
	3.9 Satisfaction with Plumber	3-31
	3.10 TRP Program Satisfaction	3-34
	3.10.1 Satisfaction with Program	3-34
	3.10.2 Rebate Application.....	3-38
	3.10.3 Dropping off Toilets.....	3-39
	3.10.4 Inspection Process.....	3-40
	3.11 Factors for Choice of Toilets.....	3-41
4	COMPARISONS WITH RELATED SURVEYS	4-1

List of Appendices

<u>Appendix</u>		<u>Page</u>
A	SURVEY INSTRUMENTS	A-1



TABLE OF CONTENTS (continued)

List of Exhibits

<u>Exhibit</u>		<u>Page</u>
2-1	Distribution of Customer Satisfaction Survey Sample Frame and Projected Distribution of Sample by Borough	2-3
3-1	Response Rates by Respondent Category	3-1
3-2	Survey Responses by Borough	3-3
3-3	Toilet Makes and Models Most Frequently Installed in Survey Respondents' Homes	3-3
3-4	Technology Types of Toilets Installed in Respondents' Homes	3-4
3-5	Customer Satisfaction Scoring Scheme	3-5
3-6	Customer Satisfaction Rating by Respondent Type	3-8
3-7	Customer Satisfaction Rating by Toilet Technology Type by Respondent Type	3-9
3-8	Customer Satisfaction Rating by Make/Model by Homeowners/Apartment Residents Combined	3-11
3-9	Means of Customer Satisfaction Ratings by Make/Model and Respondent Type	3-12
3-10	Customer Satisfaction Rating by Borough for Apartment Residents and Homeowners Combined	3-13
3-11	Customer Satisfaction Rating by Rent Level for Tenants and Building Owners/ Managers	3-14
3-12a	Customer Satisfaction Rating by Apartment Assessed Value for Apartment Residents and Building Owners/Managers	3-15
3-12b	Customer Satisfaction Rating by Assessed Value for Homeowners	3-15
3-13a	Customer Satisfaction Rating by Building Age for Apartment Residents and Building Owners/Managers	3-16
3-13b	Customer Satisfaction Rating by Building Age for Homeowners	3-17
3-14a	Frequency of Double Flushing, New vs. Old Toilets - Apartment Residents	3-18
3-14b	Frequency of Double Flushing, New vs. Old Toilets - Homeowners	3-18
3-15	Frequency of Double Flushing, New vs. Old Toilets by Technology Type and Respondent Category	3-19
3-16	Frequency of Double Flushing of New Toilets by Make and Model (Apartment Residents and Homeowners)	3-20
3-17a	Frequency of Double Flushing, New vs. Old Toilets by Assessed Value per Apartment for Apartment Residents	3-21
3-17b	Frequency of Double Flushing, New vs. Old Toilets by Assessed Value - Homeowners	3-22
3-18a	Frequency of Clogging with New and Old Toilets by Technology Type and Respondent Category - Apartment Residents and Homeowners	3-23
3-18b	Reported Clogging with Old and New Toilets by Technology Type and Respondent Category - Building Owners and Managers and Plumbers	3-23
3-19	Frequency of Clogging of New Toilets by Make and Model (Apartment Residents Only)	3-24



TABLE OF CONTENTS (continued)

List of Exhibits (continued)

<u>Exhibit</u>		<u>Page</u>
3-20	Rootering Problems, New vs. Old Toilets by Technology Type and Respondent Category	3-25
3-21	Rootering Problems of New Toilets by Make and Model (Building Owners Only) ..	3-26
3-22	Frequency of Cleaning by Technology Type and Respondent Category (Old vs. New Toilets)	3-27
3-23	Frequency of Cleaning New vs. Old Toilets by Make and Model (Apartment Residents Only)	3-28
3-24	Frequency of Mechanical Problems with New Toilets by Technology Type and Respondent Category	3-29
3-25	Frequency of Mechanical Problems by Make and Model (Apartment Residents Only)	3-30
3-26	Satisfaction with Plumber by Technology Type and Respondent Category	3-31
3-27	Satisfaction with Plumber by Make and Model (Homeowner Only)	3-32
3-28a	Satisfaction with Plumbers by Building Age - Building Owners	3-33
3-28b	Satisfaction with Plumbers by Building Age - Homeowners	3-33
3-29	Satisfaction with Plumbers by Assessed Value per Apartment (Building Owners Only)	3-34
3-30	Satisfaction with the Toilet Rebate Program by Technology Type and Respondent Category	3-35
3-31	Satisfaction with Toilet Rebate Program by Make and Model (Homeowners Only) ..	3-36
3-32	Satisfaction with the Toilet Rebate Program by Borough (Homeowners Only)	3-37
3-33a	Satisfaction with the Toilet Rebate Program by Assessed Value per Apartment (Building Owners and Managers Only)	3-37
3-33b	Satisfaction with the Toilet Rebate Program by Property Assessed Value (Homeowners Only)	3-38
3-34	Rebate Application by Respondent Category	3-39
3-35	Dropping Off Toilet by Respondent Category	3-40
3-36	Inspection Process by Respondent Category	3-41
3-37	Factors in Choice of Toilets by Respondent Category	3-42
3-38	Factors in Choice by Technology Type (Building Owners and Managers Only)	3-43
3-39	Factors in Choice of Toilets - Three Most Common Toilet Makes and Models (Building Owners and Managers Only)	3-44
3-40	Factors in Choice of Toilets - Mean Plumber Rating by Make and Model	3-46



1. INTRODUCTION

This report is a summary of the Customer Satisfaction Survey of the Toilet Rebate Program conducted for the New York City Department of Environmental Protection. A full report is also available. It may be obtained by contacting:

Director of Conservation
Bureau of Customer and Conservation Services
New York City Department of Environmental Protection
59-17 Junction Boulevard - 13th Floor
Corona, New York 11368-5107

The full report contains everything in this summary report plus the following additional sections:

- a) Copies of all English and Spanish Questionnaires
- b) Detailed tables of the responses, indicating exact percentages.

1.1 Objectives

The Toilet Rebate Program offered rebates to property owners who replaced old water-consuming toilets (5 gallons per flush) and showerheads with new water-conserving models (1.6 gallons per flush). The Toilet Rebate Program was started in March 1994 and has replaced over 1.1 million toilets through November 1996. The survey was conducted to learn more about people's satisfaction and perceptions of their toilet's performance, since several different makes and models of 1.6 gallons per flush toilets were installed during the Toilet Rebate Program.

1.2 Overview of Survey Report

Chapter 2 of the report provides the information on the survey methodology including sample design and frame development. Chapter 3 contains the survey findings by toilet make, model and technology type and by respondent type. The overall customer satisfaction rating scale appears in Section 3.2. Finally, Chapter 4 provides our comparisons with related surveys conducted in other cities and sources for other reports.



2. SURVEY METHODOLOGY

The Customer Satisfaction Survey was mailed to random samples of single family homeowners, apartment building owners/managers, plumbers, and residents of multi-family apartment buildings in the boroughs of Manhattan, Bronx, Brooklyn and Queens who had participated in the Toilet Rebate Program (TRP). A limited telephone follow-up was conducted for the plumbers and apartment building owners/managers. Copies of the four questionnaires are in Appendix A.

2.1 Sample Design and Frame Development

Only those buildings with a Post Installation Package (PIP)-received date of March 1, 1995 through December, 1995, were sampled. The Post Installation Packages are submissions of completed, final paperwork. Once a PIP is received, an inspection is performed and then the rebate check is issued. The PIP-received date is the post-installation package receipt date; it is the closest date available to the actual installation date of the low-flow toilets and other bathroom fixtures. By fixing to the March date, we got the more recent installations. There are 27,842 residences, 19,838 homes and 320,416 apartments, in 12,575 buildings, in the resulting sampling frame.

The sample was designed to include 1,000 building owners/managers, 308 plumbers, 55,450 apartment residents, and 3,250 single family homeowners. The distribution of the number of buildings, homes, and apartments in the sampling frame and in the sample are presented in Exhibit 2-1.

Single Family Homes

The list of single family homes in the TRP database (see Exhibit 2-1.a) was sorted by borough/block/lot to guarantee city-wide geographic representation of the single family homes and a systematic random sample of 3,250 homes was drawn. A systematic random sample is an efficient equiprobable sample design. It involves randomly selecting one element from the first k elements and selecting every k th element thereafter. When the sampling frame is sorted by the characteristic of interest, systematic random sampling ensures a representative sample with respect to the characteristic of interest. In the TRP database 20,748 of the homes are single family homes (i.e., buildings with one or two units), of which 19,838 have PIP received dates on or after March 1, 1995. After the 19,838 single family homes



were sorted, a systematic random sample of 1 in 6 was selected. This yielded a sample of 3,306 single family homes. From this sample of 3,306, a systematic random sample of every 59th building was deleted leaving a final sample of 3,250, the target design sample size. Exhibit 2-1.c shows the distribution of single family homes by borough.

Multifamily Buildings

The sampling plan for sampling multi-family buildings (complexes), defined as buildings with three or more units and the same borough, block, and owner/manager, involved stratifying the sample frame into small and large building (complexes). We sent no more than 20 questionnaires to any one building so the large buildings would not dominate the sample. If the larger buildings were permitted to dominate the sample, the variation in the responses would be reduced because the customer satisfaction responses from respondents with the same owner/manager, i.e., from the same building, would be expected to be very similar.

The frame for sampling multifamily buildings¹ consisted of 12,575 buildings (complexes) and 320,416 apartments (see Exhibit 2-1.a and b). The buildings (complexes) were stratified by size according to the following scheme:

First Stratum:	3-100 units:	12,091 buildings and 230,832 apartments
Second Stratum:	101 units and up:	484 buildings and 89,584 apartments

For buildings (complexes) within the first stratum, the plumber worksheet file -- a list of all apartments with low-flow toilets installed -- was sorted on borough/block/lot and apartment number and a systematic random sample of 1 in 5 apartments was drawn. This is an efficient equi-probability sample of apartments designed to ensure city-wide spread and no more than 20 surveys sent per building. From this sample of 46,166, every 117th apartment was deleted leaving a final sample of 45,772. All 484 buildings in the second stratum were sampled. A random sample of 20 apartments within each of these building (complex) was drawn. The resulting sample size was 9,680 apartments from buildings with 101 or more apartments. The final multi-family sample size from both strata was 55,452, as in Exhibit 2-1.d.

¹ Those with PIP received dates on or after March 1, 1995.



**Exhibit 2-1 Distribution of Customer Satisfaction Survey Sample Frame and Projected
Distribution of Sample by Borough**

	Single	Multi-family			Grand
Number of Units	1-2	3-100	101+	Total	Total
a. Distribution of Buildings in Sampling Frame					
Manhattan	43	2,324	174	2,498	2,541
Bronx	1,899	1,876	84	1,960	3,859
Brooklyn	4,468	4,681	94	4,775	9,243
Queens	13,248	3,210	132	3,342	16,590
Total	19,838	12,091	484	12,575	32,413
b. Distribution of Homes and Apartments in Sampling Frame					
Manhattan	62	56,013	33,023	89,036	89,098
Bronx	2,900	48,228	15,459	63,687	66,587
Brooklyn	6,978	72,827	17,175	90,002	96,980
Queens	17,902	53,764	23,927	77,691	95,593
Total	27,842	230,832	89,584	320,416	348,258
c. Distribution of Buildings in Sample					
Manhattan	7	2,266	174	2,440	2,447
Bronx	311	1,691	84	1,775	2,086
Brooklyn	732	3,963	94	4,057	4,789
Queens	2,200	2,683	132	2,815	5,015
Total	3,250	10,603	484	11,087	14,337
d. Distribution of Homes and Apartments in Sample					
Manhattan	7	11,107	3,480	14,587	14,594
Bronx	311	9,563	1,680	11,243	11,554
Brooklyn	732	14,441	1,880	16,321	17,053
Queens	2,200	10,661	2,640	13,301	15,501
Total	3,250	45,772	9,680	55,452	58,702
Design Total	3,250	45,770	9,680	55,450	



Plumbers

The sampling plan for sampling plumbers involved identifying and surveying the qualified plumber(s) who installed the low-flow toilets and other bathroom fixtures for each sampled single family home and each sampled apartment. The number of licensed qualified plumbers in the TRP database was 308. Because this number was less than the original target sample size of 500 qualified plumbers, all 308 qualified plumbers were mailed the questionnaire.

Multi-family Owners/managers

The sampling plan for sampling multi-family owners/managers involved identifying and surveying 1,000 of the multi-family apartment building owners/managers associated with the selected multi-family apartments. The number of apartment building owners/managers associated with the selected apartments is 2,212. A simple random sample of 1,000 owners/managers was selected.

2.2 Methodology

A questionnaire was developed and approved by DEP for each of the groups in the Customer Satisfaction Survey (single-family home owners, multi-family apartment building residents, apartment building owners/managers, and plumbers). Also, the questionnaires were translated into Spanish for each of the groups. A one-time mailing was conducted to each sampled household or business of the appropriate English and Spanish questionnaire. Each questionnaire for the mailout was a four-sided booklet. The front page was a letter from DEP, signed by Commissioner Marilyn Gelber, explaining the Toilet Rebate Program and soliciting a response. The remaining 3 pages contained the 10-15 questions. At the end of the questionnaire the respondents were asked to return the completed booklet to Westat, Inc., using the business reply envelope included in the mailing. A limited telephone follow-up was conducted with plumbers and building owners/managers approximately three weeks after their respective mailout dates.

The questionnaires were mailed out between May and July 1996. The telephone follow-up for plumbers began in June and for building owners and managers it began in July. The mail questionnaires for plumbers and building owners and managers were modified for the telephone follow-up. Telephone interviewers were provided with instructions for contacting the respondents and training on the questionnaires. A week before each telephone effort began a list of those (plumbers or building owners and



managers) who had not responded to the mail survey was printed out and the call records were created. Each telephone follow-up field period lasted approximately 3 weeks.

The plan used differed from the original plan that was in the statement of work. The original plan called for a mail survey of up to 60,000 persons across the four groups, with an incentive to increase response. The incentive was a random drawing of a cash prize. Building owners/managers were eligible to win \$1,000, plumbers \$1,000, single-family home owners and apartment residents together would be eligible to win \$8,000. The original plan also called for limited telephone follow-up with the building owners/managers and the plumbers. When DEP decided not to implement the lottery, Westat proposed alternative plans to increase the response rate. These involved different combinations of repeated mailings and telephone followup for the homeowners and apartment residents. All were rejected by DEP. Without any incentive or nonresponse followup, Westat estimated that a total response rate of 15% - 20% would be obtained.

2.3 Data Preparation

All completed questionnaires (received either by mail or telephone) were sent to data preparation in batches as they were received. All cases were verified for completeness and to make sure all answers were clearly marked and legible. After data preparation, the batched questionnaires were sent to data entry for key entry. All data were machine edited using Westat's proprietary coding and editing system COED. The COED code books were created for each questionnaire. The code book specifies the allowable responses and logic statements. Any mistakes or inconsistencies were checked against the hard copy questionnaires to verify the data items. These items were corrected in the data file.

The response files for the apartment residents, single family homeowners, and building owners/managers were merged with ancillary files -- an RPAD extract which contained data for walk-up and elevator apartments (received from the City of New York); a "link file" linking each unique borough, block, and lot combination to a particular Census tract and block group (received from the City of New York); and a Census file containing Census information for New York City at the tract and block group level (generated by Westat) -- to obtain information on the age of the building, the building's assessed value, and the average rent level.



The data file containing the apartment residents responses was merged with i) the RPAD extract to obtain the building age and building assessed value, ii) the link file to obtain the Census tract and block group associated with the building's borough, block and lot identifiers, and iii) the New York City Census file to obtain median rents. The data file containing the single family homeowners responses was merged with i) the link file to obtain the Census tract and block group associated with the building's borough, block and lot identifiers and ii) the New York City Census file to obtain the median building age and building assessed value. The data file containing the building owner responses was merged with i) the RPAD extract to obtain the building age and building assessed value, ii) the link file to obtain the Census tract and block group associated with the building's borough, block and lot identifiers, and iii) the New York City Census file to obtain median rents. Reported below are detailed descriptions of the process of merging the survey data with the ancillary files for reporting the survey data by economic variables.

Apartment residents

A file containing the 4,318 multi-family buildings associated with a respondent in the apartment resident surveys was generated and included the borough, block, and lot and a Westat ID to merge the information back into the apartment resident file. Presented below is a detailed step by step listing of the merging procedures and results, including the percents and numbers matched or missing.

Step 1: The first step was to merge this file with the RPAD file by borough, block, and lot. The RPAD database contains information on the building assessed value and age for multi-family buildings. This merge obtained a 93% match rate.

Step 2: The next step was to merge this file with the link file that contained the Census tract and block group for each unique borough, block, and lot combination. The problems with this file were i) that this file did not contain data for Queens (borough 4) and ii) many combinations of borough, block and lot for the remaining three boroughs did not have corresponding Census tract and block group identifier (possibly indicating an incomplete data file). Of the 4,318 multi-family buildings, 2,533 had a corresponding Census tract and block group in the link file. Of these 2,533 buildings, 93% had information on assessed value and the year built from the RPAD database.

Step 3: These 2,533 buildings were then merged with the New York City Census data file by Census tract and block group to obtain median rent values within the building's Census block group. This merge produced a ten percent (10%) match rate with the New York City Census file. The main cause of



the small match rate was that the Census block group identifier obtained from the link file did not match the Census block group identifier from the New York City Census data file.² An attempt to work around this problem was made by merging the resulting data file from step 2 with the New York City Census data file by Census tract only. This merge, however, produced the same match rate.

After the data merges were completed, data on the building's assessed value and age were available for 3,987 of the 4,318 buildings (92%) and data on the median rent was available for only 257 of the 4,318 buildings (6%).

Single family homeowners

A file containing the 955 single family buildings associated with a respondent in the homeowner surveys was generated and included the borough, block, and lot and a Westat ID to merge the information back into the apartment resident file. The use of the RPAD file to obtain the single family building's assessed value and age was restricted because the file contains only data on multi-family buildings. Presented below is a detailed step by step listing of the procedures and results, including the percent or number matched or missing.

Step 1: The first step was to merge this file with the link file to obtain a Census tract and block group identifier for each unique borough, block, and lot combination. The problems with this file were i) this file did not contain data for Queens (borough 4) and ii) many combinations of borough, block and lot for the remaining three boroughs did not have corresponding Census tract and block groups. Of the 955 multi-family buildings, 299 had a corresponding Census tract and block group in the link file.

Step 2: These 299 buildings were then matched with the New York City Census data file by Census tract and block group file to obtain neighborhood assessed values and age ranges. This merge produced a less than one percent match rate for the assessed value and age ranges. The main cause of the small match rate was that the Census block group identifier obtained from the link file did not match the Census block group identifier from the New York City Census data file. An attempt to work around this problem was made by merging the resulting data file from step 1 with the New York City Census data file by Census tract only. This merge produced a 96% match rate for the 299 buildings.

² The Census block group variable in the New York City Census file ranges from 1 to 9 whereas the Census block group variable in the link file ranges from 1 to 902.



After the data merges were completed, data on the building's assessed value and age were available for only 288 of the 955 buildings (30%).

Building owners/managers

A file containing the 520 multi-family buildings associated with a respondent in the building owner/manager surveys was generated and included the borough, block, and lot and a Westat ID to merge the information back into the apartment resident file. Presented below is a detailed step by step listing of the merging procedures and results, including the percent or number matched or missing.

Step 1: The first step was to merge this file with the RPAD file by borough, block, and lot. The RPAD database contains information on the building assessed value and age for multi-family buildings. This merge obtained a 88% match rate.

Step 2: The next step was to merge this file with the link file that contained the Census tract and block group for each unique borough, block, and lot combination. The problems with this file were i) this file did not contain data for Queens (borough 4) and ii) many combinations of borough, block and lot for the remaining three boroughs did not have corresponding Census tract and block group identifier. Of the 520 buildings, 321 had a corresponding Census tract and block group in the link file. Of these 321 buildings, 88% had information on assessed value and the year built from the RPAD database.

Step 3: These 321 buildings were then matched with the New York City Census data file by Census tract and block group to obtain median rent values within the building's Census block group. This merge produced a 14 percent match rate with the New York City Census file. The main cause of the small match rate was that the Census block group identifier obtained from the link file did not match the Census block group identifier from the New York City Census data file. An attempt to work around this problem was made by merging the resulting data file from step 2 with the New York City Census data file by Census tract only. This merge produced a 97% match rate for the 321 buildings.

After the data merges were completed, data on the building's assessed value and age were available for 458 of the 520 buildings (88%) and data on the median rent was available for only 316 of the 520 buildings (61%).



An attempt was made to generate Census information for the buildings without a matched Census tract and block group by matching these buildings by borough and block, obtaining values for the Census tract associated with the borough and block combinations, and obtaining the Census information from the New York City Census file. These analyses proved to be too problematic (Census tracts crossed city blocks making merging difficult but not impossible) and of questionable utility.



3. SURVEY FINDINGS

This chapter presents the findings from the customer satisfaction survey. Section 3.1 presents the survey response rates and a discussion of their affect on the survey findings. Section 3.2 describes the customer satisfaction rating scale Westat developed to summarize the respondents' satisfaction with the ultra low flow toilets installed under DEP's Toilet Rebate Program. Sections 3.3 through 3.11 present the key survey findings with respect to customer satisfaction with the low flow toilets and with the Toilet Rebate Program. Detailed data tables are in Appendix B of the full report available from DEP, giving the survey data by respondent type, toilet technology type, toilet make and model, borough, rent level, building assessed value, and building age.

3.1 Response Rates

As described in Chapter 2, 60,008 questionnaires were mailed out; 10,202 usable responses were received. This is an overall response rate of 17 percent. The response rates varied with the respondent category, as shown in Exhibit 3-1.

Exhibit 3-1. Response Rates by Respondent Category

	Mailed	Forms Returned Undeliverable	Usable Forms Received by Mail	Usable Forms Received by Phone	Total Usable Forms Received	Percent Received
Plumbers	308	4	91	133	224	73%
Single-Family Homeowners	3,250	70	955	N/A	955	29%
Building Owners/Managers	1,000	45	274	246	520	52%
Apartment Residents	55,450	3,507	8,503	N/A	8,503	15%
Total	60,008	3,626	9,823	379	10,202	17%

The counts of 3,626 questionnaires "returned undeliverable" are based on the information supplied to Westat by DEP. These represent six percent of the questionnaires mailed out. Generally, "usable" questionnaires are non-blank questionnaires returned with the barcode ID label attached.



The overall response rates are close to what had been expected. They closely reflect the amount and type of non-response follow-up efforts authorized by the contract statement of work. Low response rates were obtained for the single-family homeowners and apartment residents because no non-response follow-up was permitted. Higher response rates were achieved for the building owners/managers and plumbers as a result of the telephone non-response follow-up efforts. It is to be noted that the numbers of questionnaires received by mail for these two groups represent 27 percent and 30 percent, respectively, of the questionnaires mailed. These percentages are close to the response rate for the homeowners (29 percent).

With these low response rates (except for the plumbers), the question of nonresponse bias arises. All surveys have the potential for non-response biases. Nonresponse bias exists in a survey when those who choose to respond and those who choose not to respond differ from each other in ways that are material to the objectives of the survey. Nonresponse bias increases as the non-response rate increases and as the differences between the respondents and non-respondents increase. There is reason to suspect that the respondents and non-respondents differ from each other in this survey. Generally, people who respond to a survey without much prompting or inducement tend to be those who have strong feelings on the subject of the survey. People who are relatively indifferent are less likely to bother to respond. This means that the single-family homeowner and apartment resident surveys, especially, are likely to be biased towards those who have strong feelings about their new toilets and the Toilet Rebate Program. What is not known is whether or not the survey is biased towards those with strong negative feelings, or towards those with strong positive feelings, or if these two groups tend cancel each other out. Even if they do cancel each other out, those who are indifferent about the program or who have mild opinions are likely to be underrepresented in the survey.

Exhibit 3-2 displays the survey responses by borough. Comparing this exhibit with Exhibit 2-1d, it can be seen that the response rate does not vary very much by borough, from 13 percent in Bronx to 18 percent in Queens. The 8,503 apartment responses came from 4,321 apartment buildings, an average of 2 responses per building.



Exhibit 3-2. Survey Responses by Borough

<i>Borough</i>	<i>Apartment Residents</i>	<i>Homeowners</i>	<i>Total Responses</i>	<i>Number of Apartment Buildings</i>
Manhattan	2,624	1	2,625	1,170
Bronx	1,429	89	1,518	767
Brooklyn	2,289	213	2,502	1,301
Queens	2,161	652	2,813	1,083
Total	8,503	955	9,458	4,321

Over 140 different makes and models of toilets have been installed in the 9,458 residences surveyed. However, a few makes and models account for most of the responses, as shown in Exhibit 3-3.

Exhibit 3-3. Toilet Makes and Models Most Frequently Installed in Survey Respondents' Homes

<i>Toilet Make and Model</i>	<i>Single-Family</i>		<i>Total</i>
	<i>Apartments</i>	<i>Homes</i>	
Gerber Aqua Saver 21-700/702	1,617	466	2,083
American Standard Colony 1.6	1,251	4	1,255
Crane Civic 3-195E	962	2	964
Crane Cranemiser 3-662	744	78	822
Gerber Ultra Flush 25-642/644	751	16	767
Toto Kiki USA CST 703	492	151	643
Peerless Pottery Hydromiser 5160/5161	546	28	574
Briggs Ultraconservor 4775	486	2	488
Crane Santa-Fe C-4241	254	15	269
All Others	1,400	193	1,593
Total	8,503	955	9,458

The nine makes and models listed in Exhibit 3-3 are the nine most common ones. They account for 83 percent of the toilets installed in respondents' homes. Tabulations of survey results by make and model will therefore display these nine makes and models. In some data displays, especially those that subdivide toilet makes and models by other factors, may exclude some of these nine makes and models, because the resultant sample sizes are too small for meaningful analysis and interpretation. Three makes have combined model numbers, because the models only differ in the "rough-in" distance, which is not a basis for a difference in performance. These are the Gerber Aqua Saver 21-700 and 21-702, Gerber Ultra Flush 25-642 and 25-644, and the Peerless Pottery Hydromiser 5160 and 5161.

The low flow toilets installed in respondents' homes fall into one of three technology types, gravity tank, flush valve, and pressurized tank. Approximately two-thirds of the toilets installed in



respondents' homes have gravity tanks, while only 18 have pressurized tanks, as shown in Exhibit 3-4. Therefore, many of the exhibits that break out results by technology type will omit pressurized tanks, because the sample sizes are again too small for meaningful analysis and interpretation.

Exhibit 3-4. Technology Types of Toilets Installed in Respondents' Homes

<i>Technology Type</i>	<i>Apartments</i>	<i>Single-Family Homes</i>	<i>Total</i>
Gravity Tank	5,151	919	6,070
Flush Valve	3,324	27	3,351
Pressurized Tank	12	6	18
Not Ascertained	16	3	19
Total	8,503	955	9,458

Exhibits 3-3 and 3-4 also show large differences in the makes and models of the low flow toilets selected by single-family homeowners for their own use and those selected by multifamily building owners/managers for the residents of the buildings. For example, American Standard Colony 1.6 was installed in 14 percent of the apartments, but in only four single-family homes.

3.2 Toilet Customer Satisfaction Rating Scale

The data from the Customer Satisfaction Surveys was analyzed to provide estimates of the following:

- 1) Overall customer satisfaction for each toilet make/model and technology type;
- 2) Differences in responses between owners and managers and residents and between boroughs, census block groups, average rent levels, building assessed values and building age classes;
- 3) Differences in product choices between owners of single family homes and multi-family apartment buildings and between boroughs, census block groups, average rent levels, building assessed values and building age classes; and
- 4) Single family homeowner, building owner, and plumber responses to TRP program questions and responses to TRP program questions by borough, census block group, average rent level, building assessed value and building age class.



Westat created a customer satisfaction rating, or score, for each toilet make/model and technology type (referred to as the product satisfaction score) calculated using the responses from questions regarding the relative frequencies of double flushing, cleaning, appearance, clogging, "rootering," and mechanical problems from all four surveys. Five questions from the apartment residents survey were used in computing the product satisfaction score (double flushing, cleaning, clogging, appearance, and mechanical problems); five questions from the single family homeowners survey were used in computing the product satisfaction score (double flushing, cleaning, clogging, "rootering," and mechanical problems); three questions from the building owners/managers survey were used in computing the product satisfaction score (clogging, "rootering," and mechanical problems); and two questions from the plumbers survey were used in computing the product satisfaction score (clogging and mechanical problems).

For the data in the apartment resident, homeowner, and building owner/manager files, an average score was calculated for each respondent. For the data in the plumber files, an average score was calculated for each toilet make/model listed by each plumber. An overall score was calculated by averaging the scores from the four survey types, thus giving each survey type the same weight. The manner in which the points were assigned to the responses is presented in Exhibit 3-5.

Exhibit 3-5 Customer Satisfaction Scoring Scheme

Survey Respondent	Question	Question Response	Customer Satisfaction Score
Apartment Residents	Double-flushing	Less often	5
		About the same	3
		More often	1
	Cleaning	Less often	5
		About the same	3
		More often	1
	Clogging	Less often	5
		About the same	3
		More often	1
	Appearance	Nicer appearance	5
		About the same	3
		Worse appearance	1
	Mechanical Problems	Less often	5
		About the same	3
		More often	1



Exhibit 3-5 Customer Satisfaction Scoring Scheme (continued)

Survey Respondent	Question	Question Response	Customer Satisfaction Score
Homeowners	Double-flushing	Less often	5
		About the same	3
		More often	1
	Cleaning	Less often	5
		About the same	3
		More often	1
	Clogging	Less often	5
		About the same	3
		More often	1
	"Rootering"	None	5
		Once or Twice	3
		More than twice	1
	Mechanical Problems	None	5
		Few or Some	3
		Many	1
Bldg Owner/Manager	Clogging	Less often	5
		About the same	3
		More often	1
	"Rootering"	Less often	5
		About the same	3
		More often	1
	Mechanical Problems	None	5
		Few or Some	3
		Many	1
Plumbers	Clogging	None	5
		Few or Some	3
		Many	1
	Mechanical Problems	None	5
		Few or Some	3
		Many	1

Scores for each survey type and the overall score ranged from 1 to 5. For any question, an average score around 3 indicated the respondents feel the same about both the new and old toilets, an average score above 3 indicated the respondents are happier with their new toilets than the old toilets, and an average score less than 3 indicated the respondents are not as happy with their new toilets as with their old toilets.



3.3 Customer Satisfaction Ratings

This section presents the highlights of the survey findings for the customer satisfaction rating introduced in the previous section. The first exhibit, Exhibit 3-6, presents the overall customer satisfaction ratings — means and upper and lower 95 percent confidence limits — for the installed low flow toilets, broken out by respondent type. Plumbers are the most satisfied, with an average rating of 4.11. It is to be noted that the plumber satisfaction rating scale is based only on problems that reach the plumbers' attention, while the other three groups' scales are based on problems that one might encounter daily and never call a plumber, e.g., double flushing. It is interesting to note that the apartment residents and their building owners/managers have virtually the same average satisfaction rating (2.94 and 2.88, respectively). These two groups are slightly less happy with their new toilets than the old ones. The condo and cooperative building owners had a higher average satisfaction rating at 3.16. Note the heavy gridline at a rating of 3.0 in Exhibit 3-6. Ratings above this line indicate that respondents are more satisfied with their new toilets than with their old toilets, while ratings below the line indicate the opposite.



Exhibit 3-6 Customer Satisfaction Rating by Respondent Type

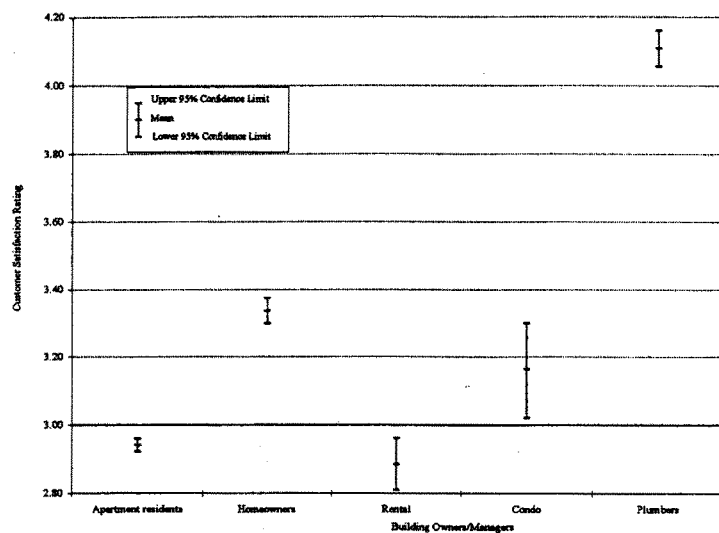
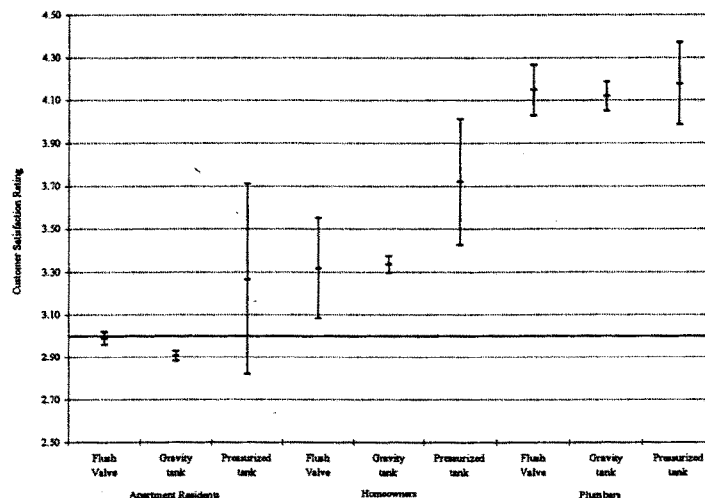


Exhibit 3-7 presents the customer satisfaction ratings broken out by respondent type and technology type. For each technology type, single family homeowners are, on average, more satisfied with their low flow toilets than are apartment residents by a statistically significant margin. While very few respondents have pressurized tank toilets, those who do are more satisfied, on average, than those with either of the other two technologies.



Exhibit 3-7 Customer Satisfaction Rating by Toilet Technology Type by Respondent Type

Exhibits 3-8 and 3-9 presents the satisfaction ratings for the nine most popular makes and models. Exhibit 3-8 displays the ratings for home owners and apartment residents, combined. Because there are over 8,500 apartment dwelling respondents and less than 1,000 homeowner respondents, these exhibits are heavily weighted to the apartment residents' viewpoints. In addition, the toilet makes and models are ordered according to the number installed in respondents' homes, as shown in Exhibit 3-3. The most common brand is at the top and the least common is at the bottom. This ordering is reflected in the increasing length of the confidence intervals from top to bottom in the exhibit. This ordering from most common to least common will be used in all exhibits of data by toilet make and model. One brand has a lower confidence interval for the mean satisfaction rating above 3.0: Toto Kiki USA CST 703. Three brands have upper confidence intervals under 3.0: Briggs Ultraconservor 4775, Crane Santa Fe C-4241, and Crane Civic 3-195E.



Exhibit 3-9 compares the mean brand-by-brand ratings for all four groups of respondents. The four types of respondents have, on average, quite different opinions of the low flow toilets. Plumbers gave mean ratings above 3.0 to every brand of toilet, except Briggs Ultraconservor 4775. For every brand but the Briggs, plumbers gave the highest of the four ratings. Homeowners also tended to be positive about the low flow toilets; no brand received an average rating below 3.0 from the homeowners. The multifamily building owners/managers and residents had similar ratings patterns. They almost always had the two lowest average ratings, and had average ratings below 3.0 — indicating less satisfaction with the low flow toilets than with the old ones — for many brands.

This pattern of apartment residents being less satisfied with the new low flow toilets than homeowners will be seen to repeat throughout the survey. We believe it is in part due to different patterns of choices for toilet makes and models. However, we think more of the difference is due to common psychological factors. The homeowners selected the toilets themselves, while the apartment residents may have had little voice in the decision to convert to a low flow toilet, much less in the choice of a particular brand. It is common for people to express satisfaction with the results of a decision they made themselves (the homeowners), but to express dissatisfaction with the results of a decision they had no voice in making.



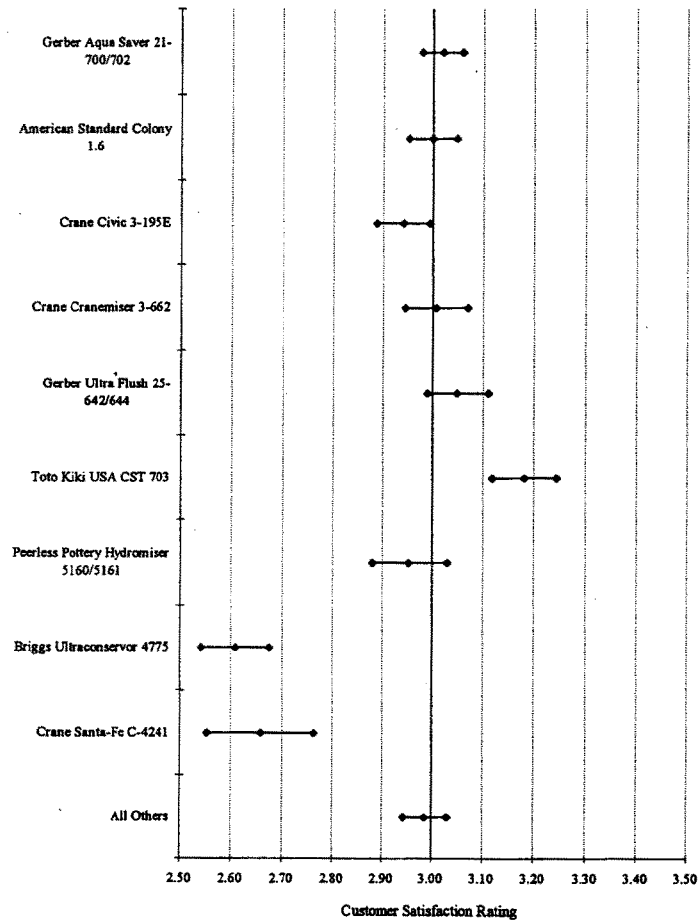
Exhibit 3-8 Customer Satisfaction Rating by Make/Model by Homeowners/Apartment Residents Combined

Exhibit 3-9 Means of Customer Satisfaction Ratings by Make/Model and Respondent Type

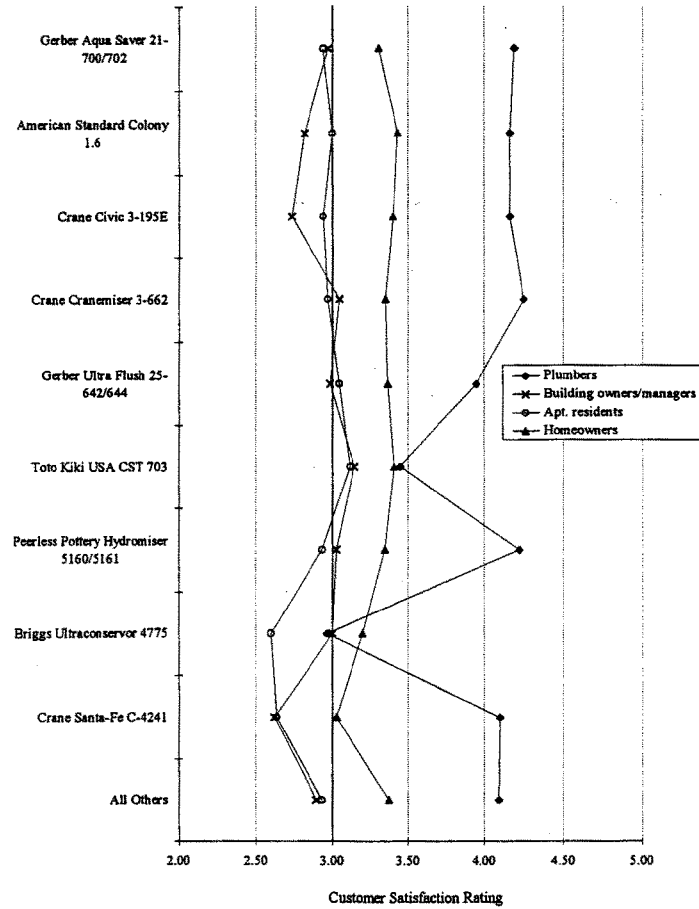
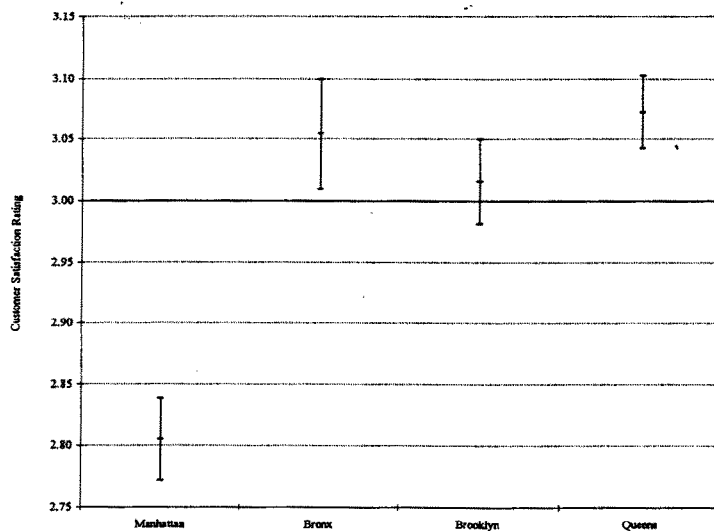


Exhibit 3-10 presents the satisfaction ratings by borough for apartment residents and homeowners, combined. Manhattan residents are, on average, less satisfied with their new low flow toilets than are residents of the other three boroughs. This difference is associated with the fact that all but one of the Manhattan respondents are apartment residents, while nearly one-fourth of the Queens respondents are homeowners.

Exhibit 3-10 Customer Satisfaction Rating by Borough for Apartment Residents and Homeowners Combined



The next two exhibits look at the relationship between the customer satisfaction ratings and economic variables. Exhibit 3-11 shows the variation in the satisfaction rating by rent level, for apartment residents and building owners/managers. There are no statistically significant differences among the groups. In contrast, Exhibit 3-12 looks at the relationship with the assessed value per apartment and reveals a significant relationship. Owners and residents of more expensive buildings are less satisfied with



their new toilets than are owners and residents of less expensive buildings. This relationship exists for apartment residents, multi-family building owners/managers, and single family homeowners. It is strongest for the apartment residents, due in part to their much larger sample size. The assessed value ranges were obtained by finding the cutpoints that divide the range \$332 to \$2,373 into five groups with approximately equal numbers of respondents and rounding off to the nearest \$1,000.

Exhibit 3-11 Customer Satisfaction Rating by Rent Level for Tenants and Building Owners/Managers

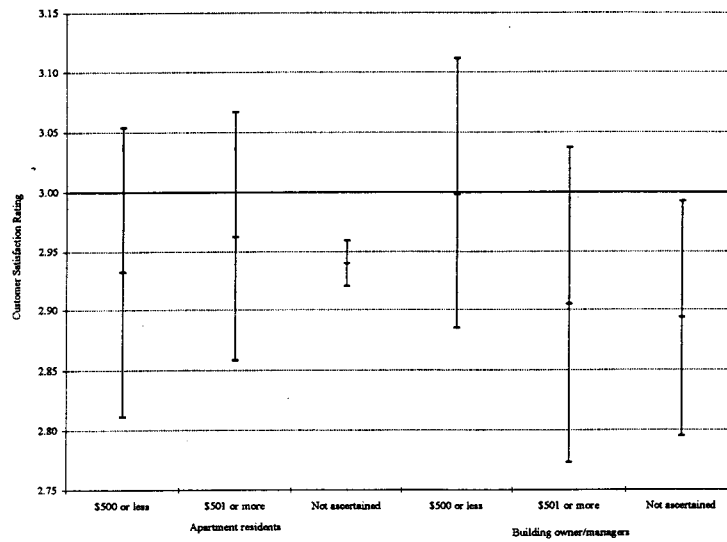
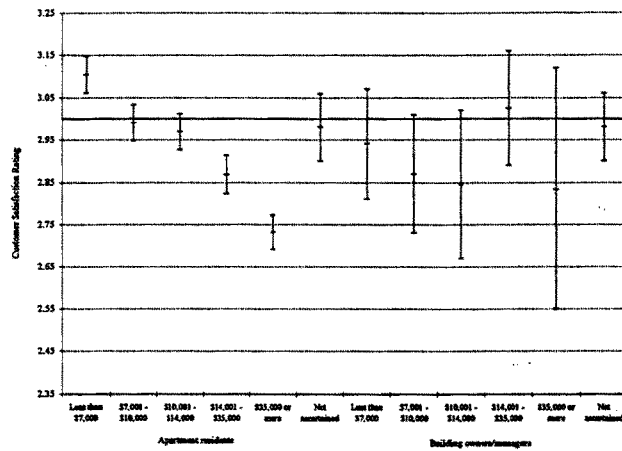
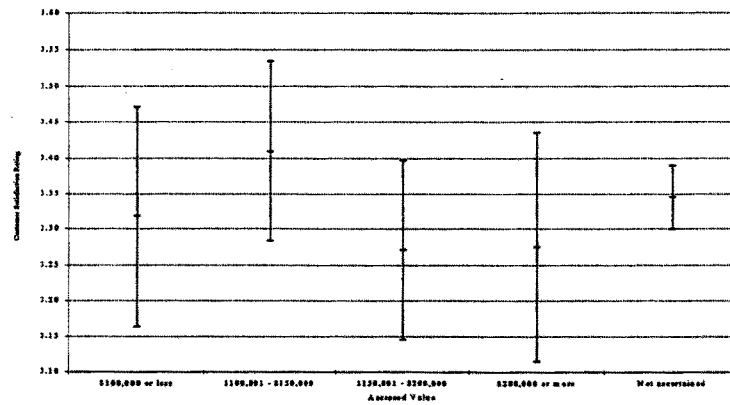


Exhibit 3-12a Customer Satisfaction Rating by Apartment Assessed Value for Apartment Residents and Building Owners/Managers**Exhibit 3-12b Customer Satisfaction Rating by Assessed Value for Homeowners**

A similar, but weaker relationship exists between the satisfaction rating and building age, as can be seen in Exhibit 3-13. Owners/managers and residents of older multi-family buildings are more satisfied with their new toilets than are respondents from newer buildings.

Exhibit 3-13a Customer Satisfaction Rating by Building Age for Apartment Residents and Building Owners/Managers

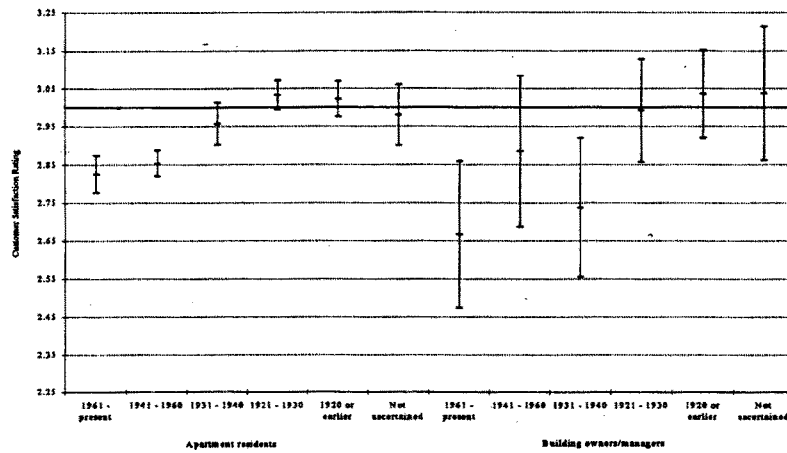
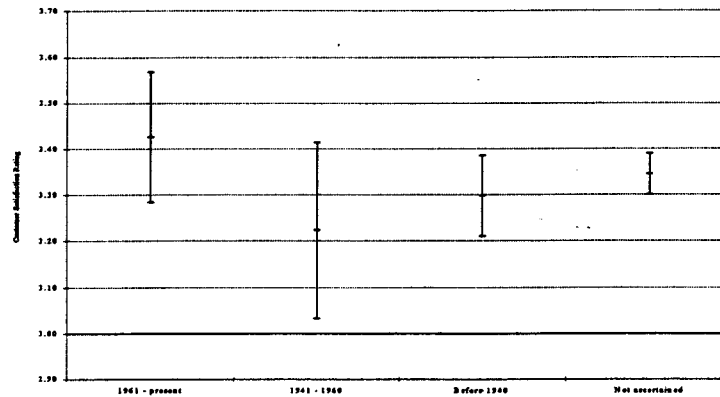
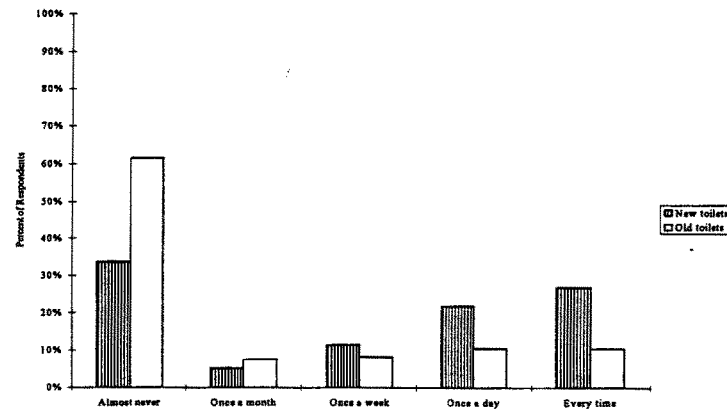
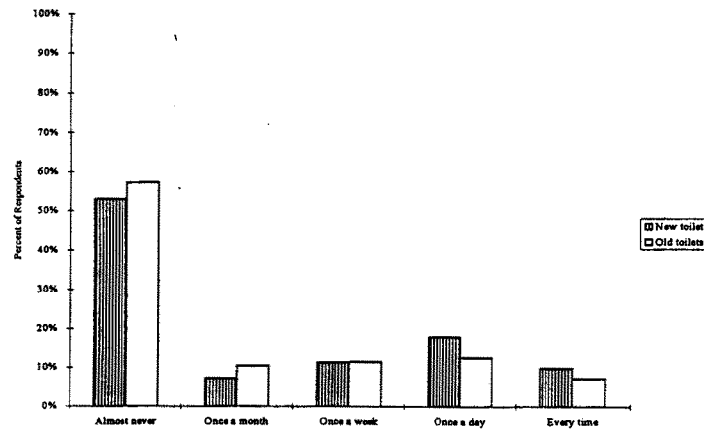


Exhibit 3-13b Customer Satisfaction Rating by Building Age for Homeowners

3.4 Frequency of Double Flushing

One complaint sometimes expressed about low flow toilets is that, with less water flowing, the flushing action does not adequately clean the bowl and it is necessary to “double flush”. The customer satisfaction survey looked at the relative frequency of double flushing for the respondents’ old and new toilets. Exhibit 3-14 compares the frequency of double flushing for the old and new toilets, for apartment residents and homeowners. Both groups reported more double flushing with the new toilets: the percentage of double flushing “almost never” dropped from 57 percent with the old toilets to 52 percent with the new toilets for homeowners and from 61 percent to 33 percent for apartment residents. However, apartment residents reported a greater increase in double flushing than did homeowners: the percentage of double flushing “once a day” or “every time” climbed from 20 percent to 28 percent for homeowners and from 21 percent to 34 percent for apartment residents.



Exhibit 3-14a Frequency of Double Flushing, New vs. Old Toilets - Apartment Residents**Exhibit 3-14b Frequency of Double Flushing, New vs. Old Toilets - Homeowners**

The type of technology employed had little affect on apartment residents' reported double flushing, as can be seen in Exhibit 3-15. About half of apartment residents reported double flushing more often with the new toilets for both flush valve and gravity tank toilets. However, homeowners, almost all of whom have installed gravity tank toilets (see Exhibit 3-4) report double flushing less often with the new toilet 43% of the time.

Exhibit 3-15 Frequency of Double Flushing, New vs. Old Toilets by Technology Type and Respondent Category

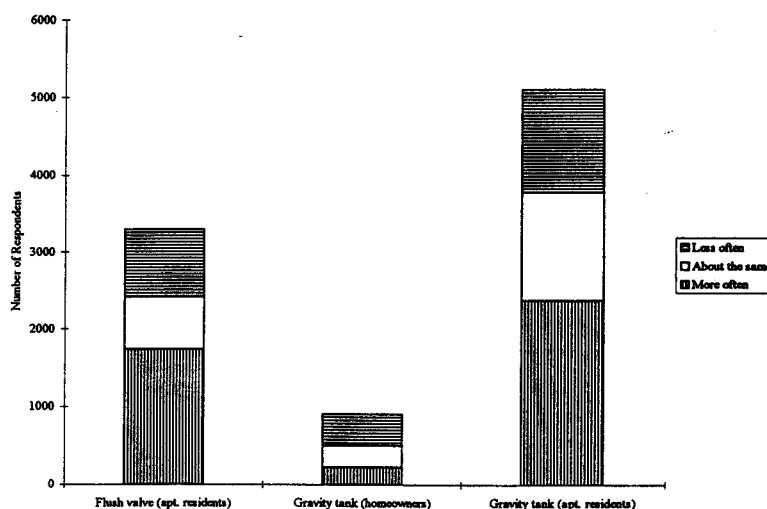
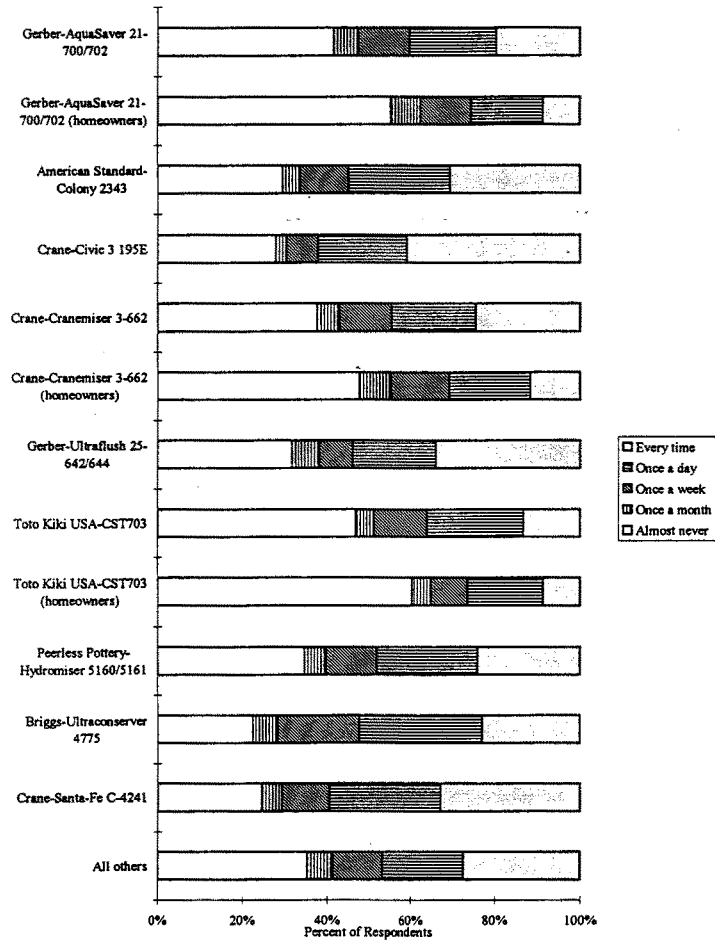


Exhibit 3-16 presents the reported frequency of double flushing for the nine most popular makes and models, for apartment residents and homeowners. Toto Kiki USA CST 703 has the lowest frequency of double flushing, followed by the Gerber model, Aqua Saver 21-700/702, while Briggs Ultraconservor 4775 and Crane Santa Fe C-4241 have the greatest frequency of double flushing. These ranking are generally close to the rankings obtained for the customer satisfaction ratings in Section 3.3.



Exhibit 3-16 Frequency of Double Flushing of New Toilets by Make and Model (Apartment Residents and Homeowners)

Residents of more expensive apartments reported slightly more double flushing with their new low flow toilets than were residents of less expensive apartments, as shown in Exhibit 3-17. Forty-one percent of apartment residents in apartments assessed under \$7,000 reported double flushing more often with their new toilets. This percentage increased as the assessed value increased, with 56 percent of the residents of apartments assessed over \$35,000 reporting double flushing more often with the new toilets. A similar pattern was observed with the homeowners.

Exhibit 3-17a Frequency of Double Flushing, New vs. Old Toilets by Assessed Value per Apartment for Apartment Residents

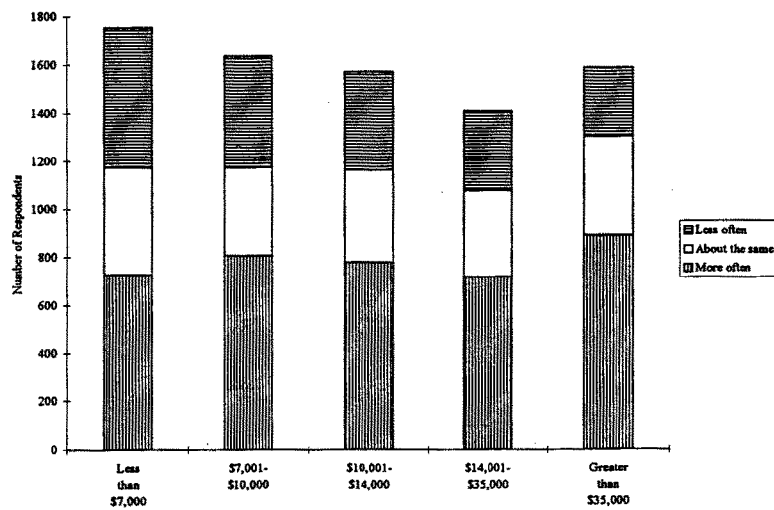
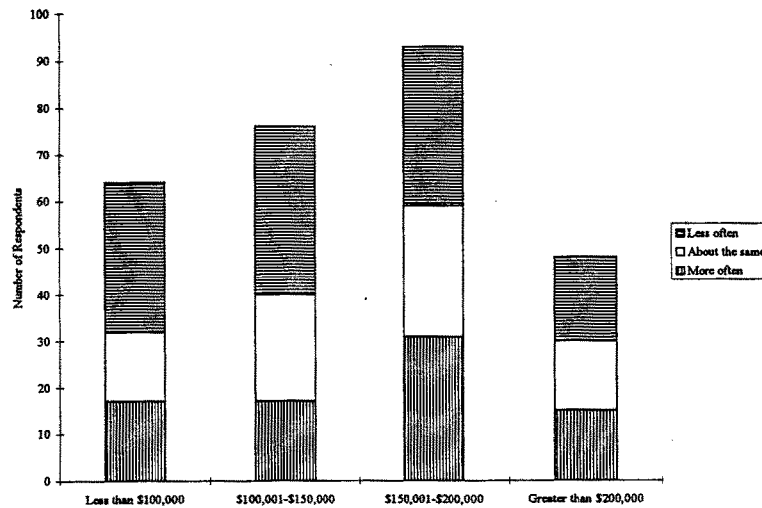


Exhibit 3-17b Frequency of Double Flushing, New vs. Old Toilets by Assessed Value - Homeowners

3.5 Frequency of Clogging

All categories of respondents reported more incidence of clogging with their new toilets than with the old ones, as can be seen in Exhibit 3-18. Apartment residents reported more clogging with the new toilets than did homeowners (43 percent versus 38 percent reported some clogging). They also reported more clogging incidents -- with both the old and new toilets -- than did the building owners/managers. As shown in Exhibit 3-19, the toilet make and models with the fewest clogging problems are the Gerber Ultra Flush 25-642/644 (25 percent reported some clogging), followed closely by the Toto Kiki USA CST 703 (28 percent). The Crane Santa Fe C-4241 (58 percent) and the Peerless Pottery Hydromiser 5160/5161 (52 percent) have the most reported clogging. These ranking are generally close to the rankings obtained for the customer satisfaction ratings in Section 3.3.



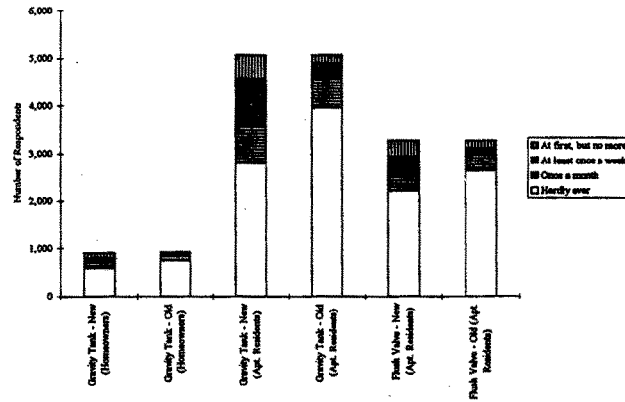
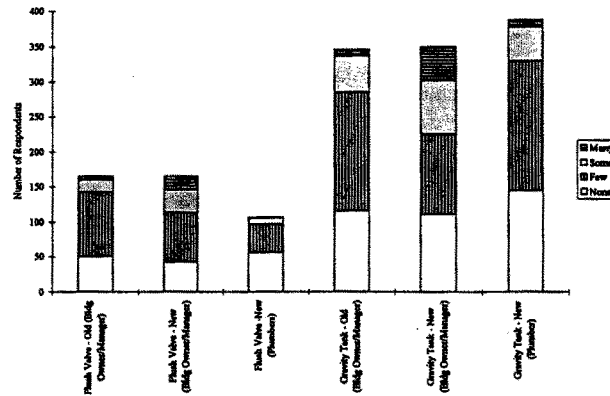
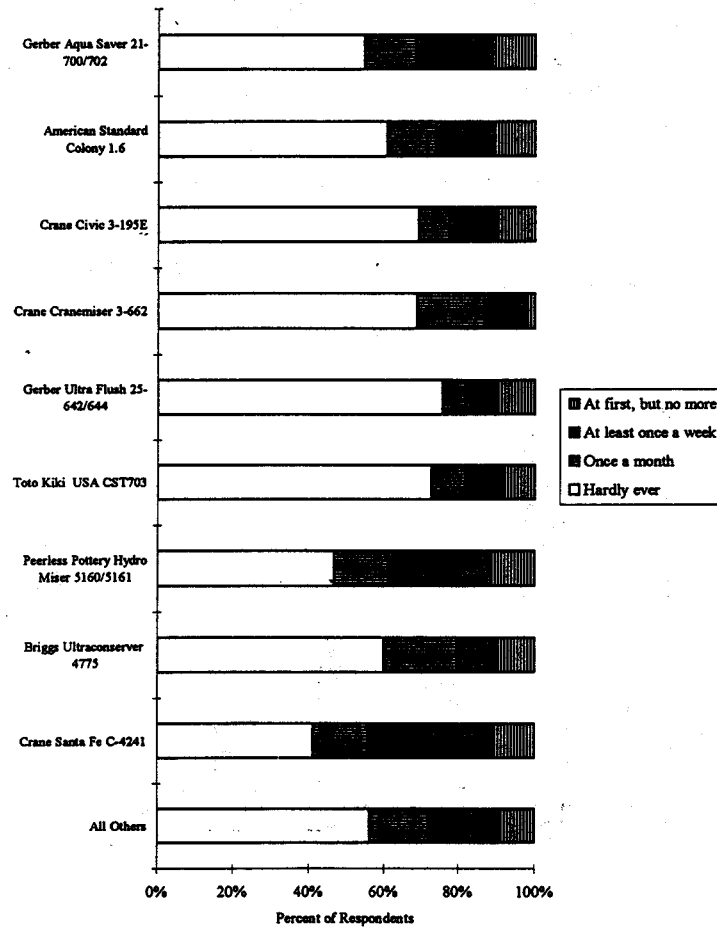
Exhibit 3-18a Frequency of Clogging with New and Old Toilets by Technology Type and Respondent Category - Apartment Residents and Homeowners**Exhibit 3-18b Reported Clogging with Old and New Toilets by Technology Type and Respondent Category - Building Owners and Managers and Plumbers**

Exhibit 3-19 Frequency of Clogging of New Toilets by Make and Model (Apartment Residents Only)

3.6 Rootering Problems

Homeowners, building owners/managers, and plumbers were asked about the frequency of rootering (sewer line clogging) problems. All three groups reported fewer instances of rootering with the new toilets than with the older ones, as shown in Exhibit 3-20. This observation must be tempered with the fact that the new toilets had been installed for less than 15 months at the time of the survey. Building owners/managers reported more instances of rootering problems than did homeowners or plumbers. There was a wide variation in the incidence of rootering among the various makes and models of toilets, as shown in Exhibit 3-21. The Toto Kiki USA CST 703 had the fewest rootering problems, while the American Standard-Colony 2343 had the most.

Exhibit 3-20 Rootering Problems, New vs. Old Toilets by Technology Type and Respondent Category

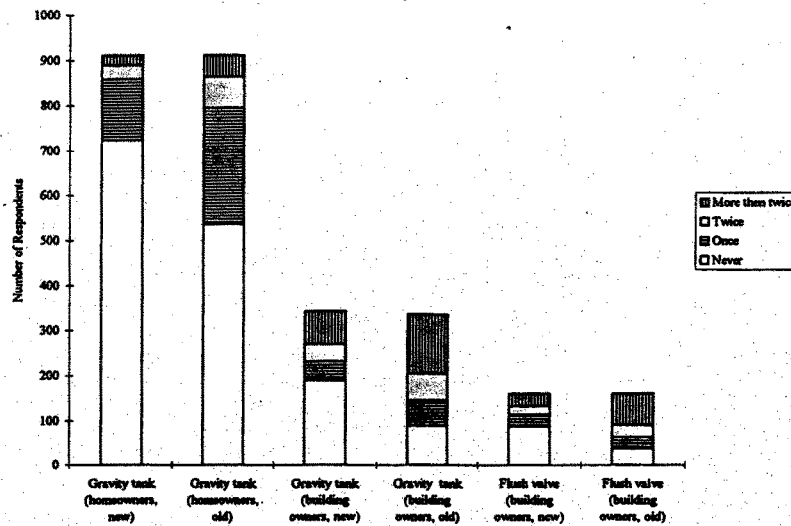
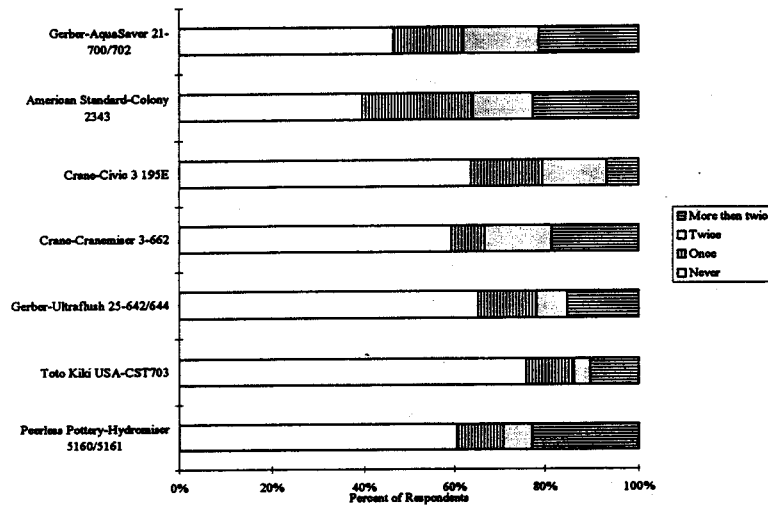


Exhibit 3-21 Rootering Problems of New Toilets by Make and Model (Building Owners Only)

3.7 Frequency of Cleaning

Homeowners and apartment residents were asked if the new low flow toilets required more or less frequent cleaning than the old ones. A majority of respondents reported that the new toilets required cleaning about as often as the old ones, as shown in Exhibit 3-22. Apartment residents were more likely to report more frequent cleaning with the new toilets than the old. All common makes and models of the new toilets required cleaning about as often as the toilets they replaced, according to the apartment dwelling respondents (Exhibit 3-23). However, a few brands were reported by many respondents to require cleaning more often than the old toilets. These include the Briggs Ultraconservor 4775 at 45 percent more often, the Gerber Aqua Saver 21-700/702 at 36 percent, and the Crane Santa Fe C-4241 at 41 percent more often.



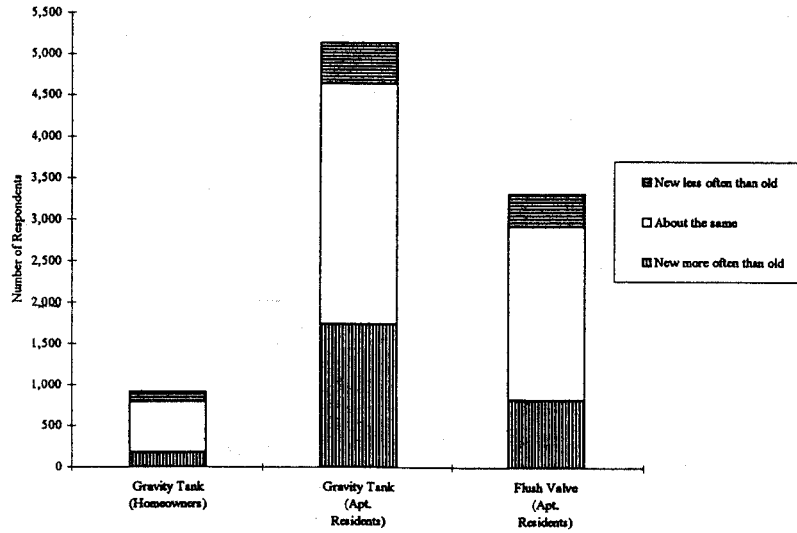
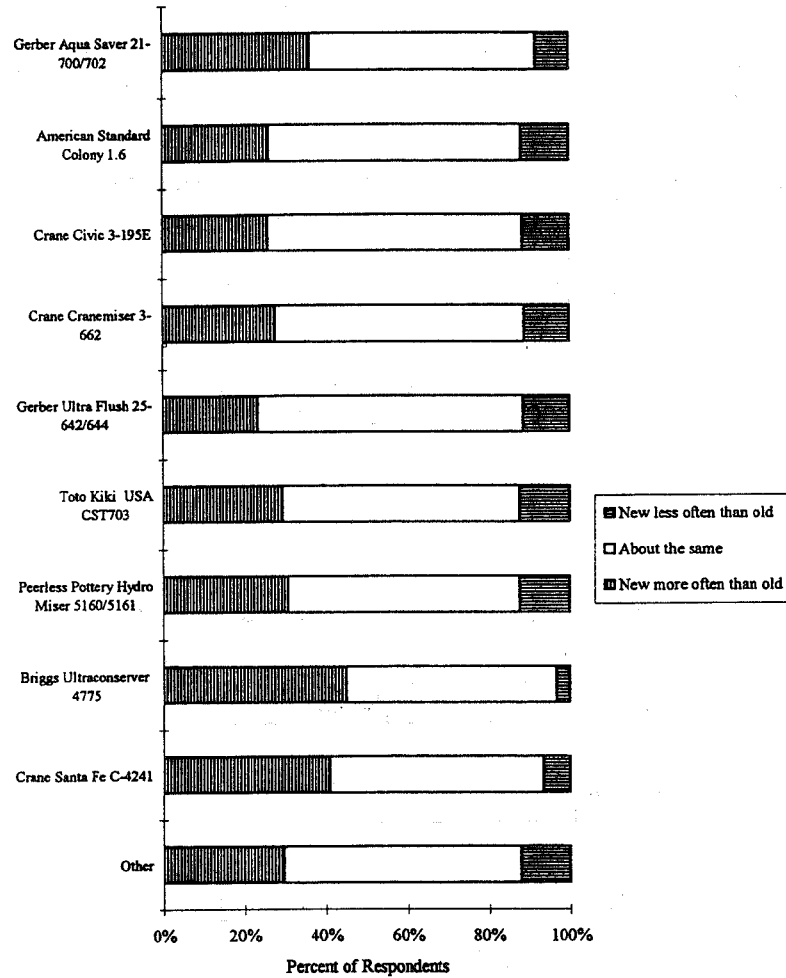
Exhibit 3-22 Frequency of Cleaning by Technology Type and Respondent Category (Old vs. New Toilets)

Exhibit 3-23 Frequency of Cleaning New vs. Old Toilets by Make and Model (Apartment Residents Only)

Frequency of Mechanical Problems

All four groups of respondents were asked about the incidence of mechanical problems with the new toilets. As shown in Exhibit 3-24, multi-family building owners/managers with flush valve toilets reported the greatest incidence of mechanical problems, while homeowners with gravity tank toilets reported the least. Most brands of toilets had few mechanical problems, as reported by apartment residents (Exhibit 3-25).

Exhibit 3-24 Frequency of Mechanical Problems with New Toilets by Technology Type and Respondent Category

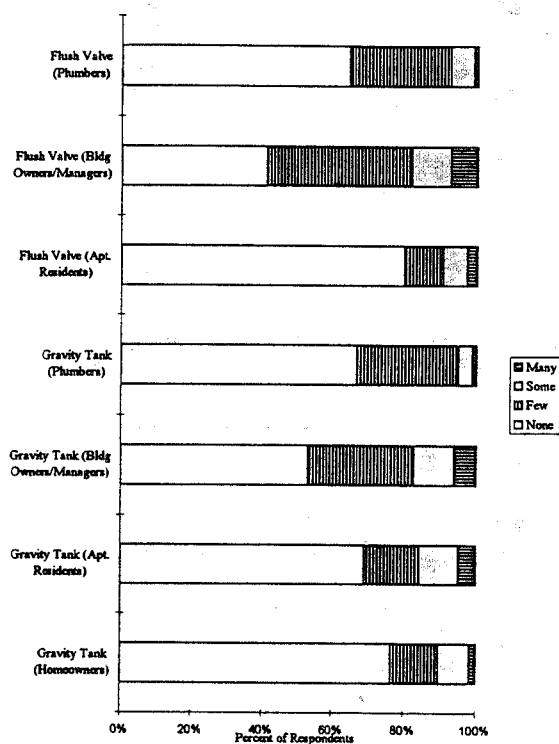
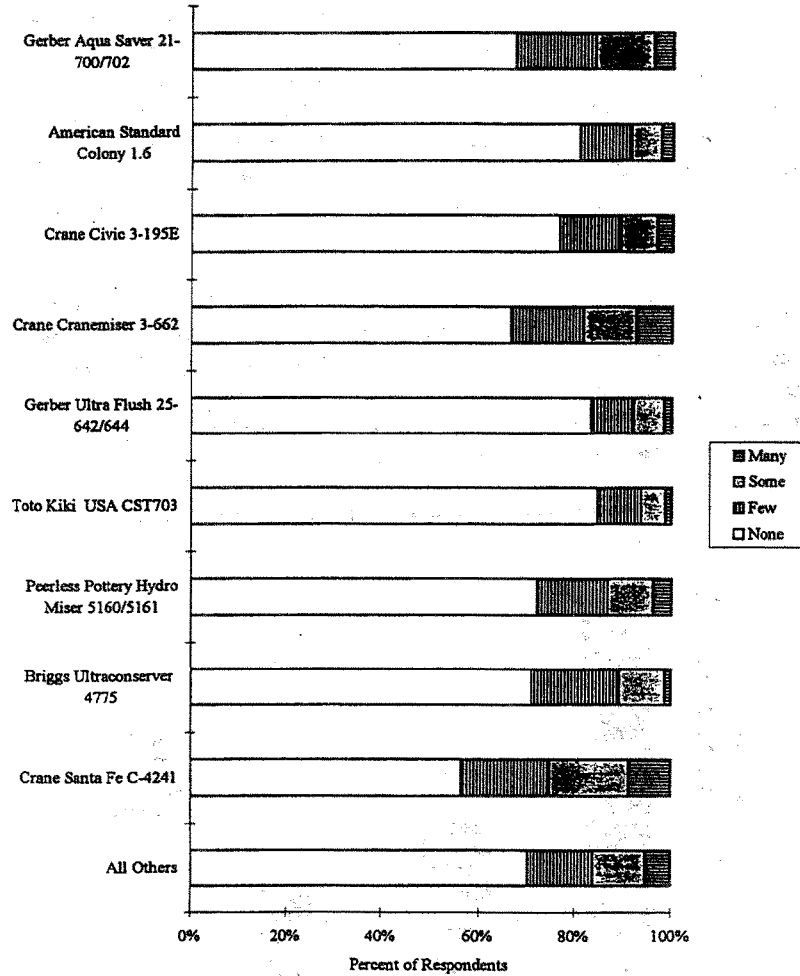


Exhibit 3-25 Frequency of Mechanical Problems by Make and Model (Apartment Residents Only)

3.9 Satisfaction with Plumber

One dimension of satisfaction with the program is degree of satisfaction with the plumber who installed the low flow toilet. Single family homeowners and multi-family building owners and managers were asked how satisfied they were with their plumbers. Most respondents were satisfied or very satisfied with their plumbers: 71 percent of those who had gravity tanks installed and 80 percent of building owners who had flush valve toilets installed (Exhibit 3-26). Exhibit 3-27 looks at the five most popular brands among homeowner respondents. Seventy-eight percent of respondents who had the Peerless Pottery Hydromiser 5160/5161 were satisfied or very satisfied with the plumber. The Gerber Aqua Saver 21-700/702 was close behind at 74 percent.

Because the customer satisfaction rating showed some evidence of trends with building age and assessed value, the relationship between these factors and plumber satisfaction was examined. Exhibits 3-28 and 3-29 summarize the findings. There are slight trends in increasing plumber satisfaction among owners and managers of multifamily buildings. Owners of newer buildings and owners of buildings with more expensive apartments are more likely to be satisfied or very satisfied with their plumber. On the other hand, there is no discernible relationship for single family homeowners.

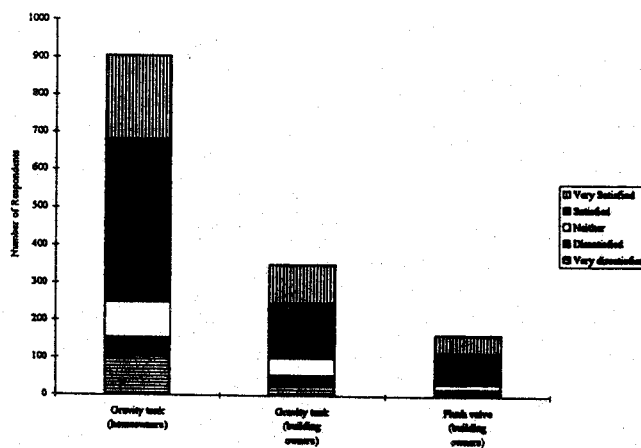
Exhibit 3-26 Satisfaction with Plumber by Technology Type and Respondent Category

Exhibit 3-27 Satisfaction with Plumber by Make and Model (Homeowner Only)

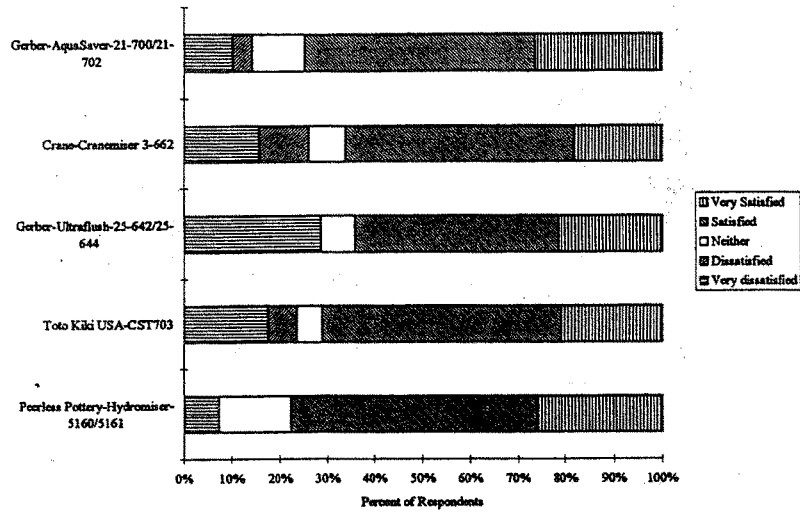


Exhibit 3-28a Satisfaction with Plumbers by Building Age - Building Owners

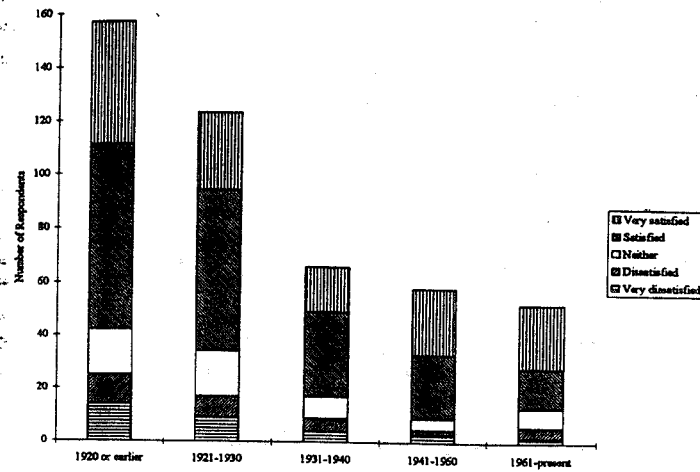


Exhibit 3-28b Satisfaction with Plumbers by Building Age - Homeowners

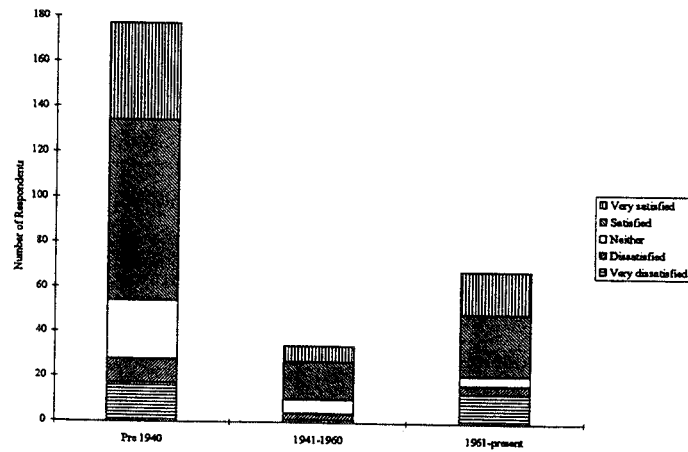
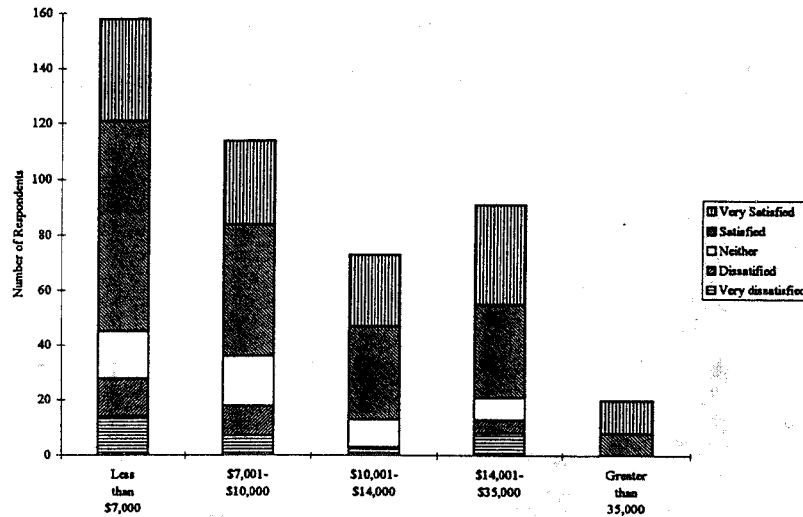


Exhibit 3-29 Satisfaction with Plumbers by Assessed Value per Apartment (Building Owners Only)**3.10 TRP Program Satisfaction**

The survey sought homeowners', building owners, and plumbers' opinions of the Toilet Rebate Program. This was accomplished through a question asking how satisfied they were with the TRP program in general, preceded by questions that focused on three specific aspects of the program: the rebate application, the procedure for dropping off the old toilets, and the inspection process.

3.10.1 Satisfaction with Program

About three-fourths of respondents were satisfied or very satisfied with the TRP program. As can be seen in Exhibits 3-30 through 3-33, this percentage held through nearly all respondent breakdowns.



All breakdowns displayed in these exhibits had between 68 and 85 percent of respondents who were satisfied or very satisfied with the program. The two extremes are in Exhibit 3-31, program satisfaction by toilet make and model. The highly rated Toto Kiki USA CST-703 had 85 percent satisfied or very satisfied, while the Cranemiser 3-662 had only 68 percent satisfied or very satisfied.

Exhibit 3-30 Satisfaction with the Toilet Rebate Program by Technology Type and Respondent Category

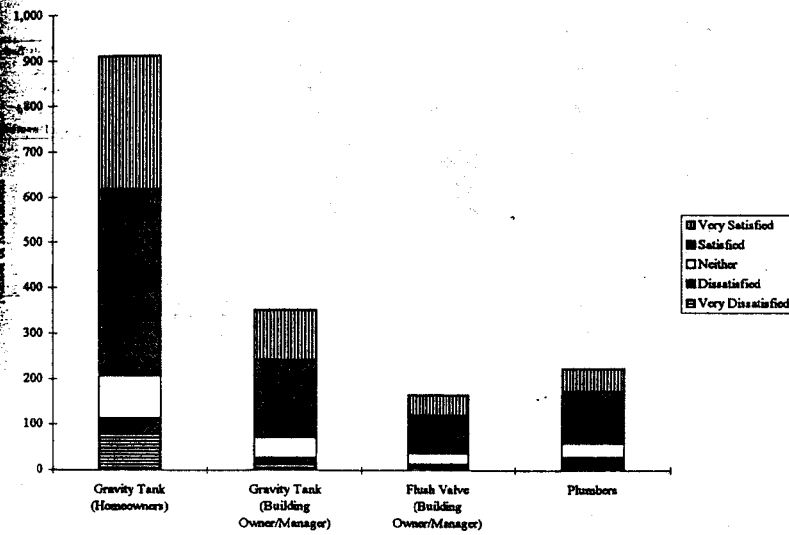


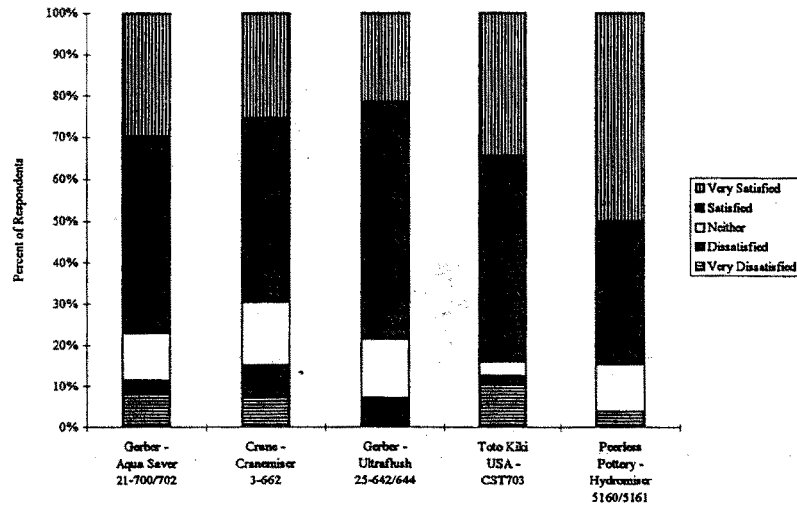
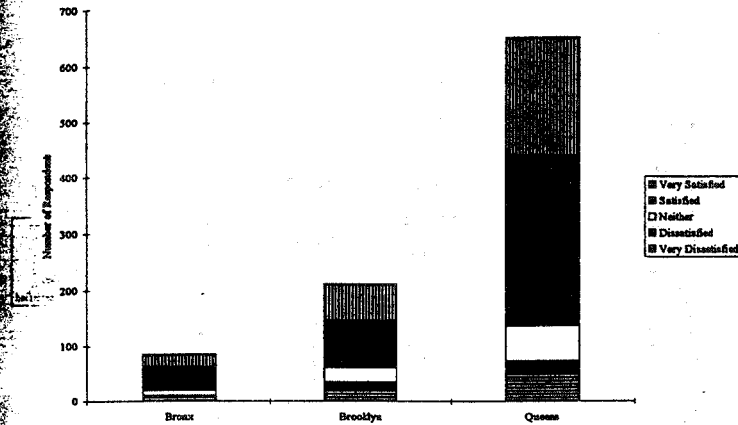
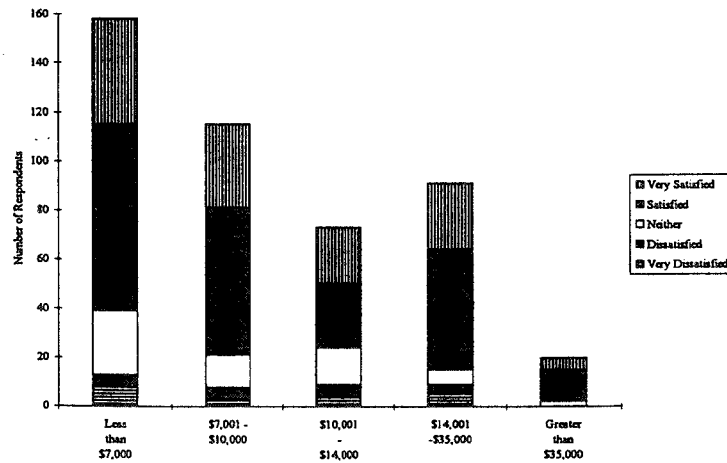
Exhibit 3-31 Satisfaction with Toilet Rebate Program by Make and Model (Homeowners Only)

Exhibit 3-32 Satisfaction with the Toilet Rebate Program by Borough (Homeowners Only)**Exhibit 3-33a** Satisfaction with the Toilet Rebate Program by Assessed Value per Apartment (Building Owners and Managers Only)

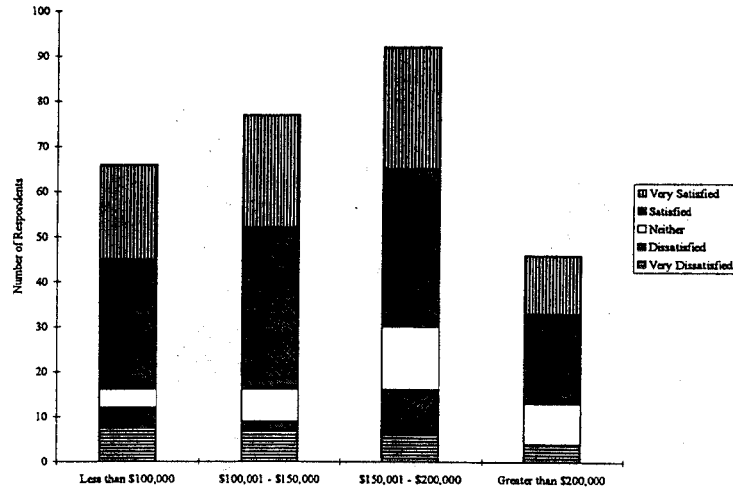
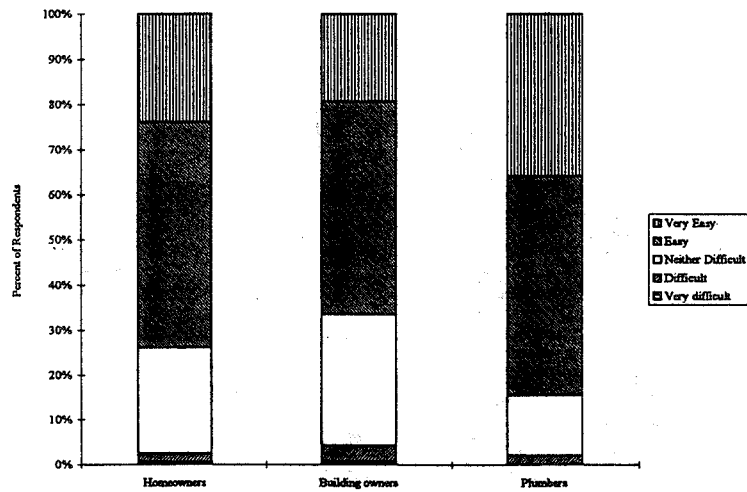
**Exhibit 3-33b Satisfaction with the Toilet Rebate Program by Property Assessed Value
(Homeowners Only)****3.10.2 Rebate Application**

Exhibit 3-34 shows that most respondents found the TRP program rebate application was easy or very easy to complete. Less than four percent of respondents found the application difficult or very difficult to complete.



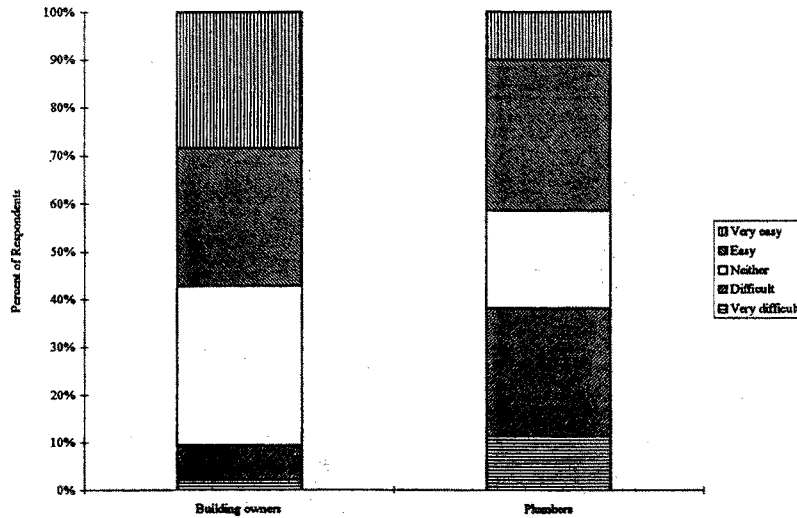
Exhibit 3-34 Rebate Application by Respondent Category



3.10.3 Dropping off Toilets

Plumbers reported much more difficulty with the process of dropping off the old toilets than did building owners/managers, as shown in Exhibit 3-35. Ten percent of responding building owners/managers found the process difficult or very difficult, while 38 percent of plumbers expressed this opinion.

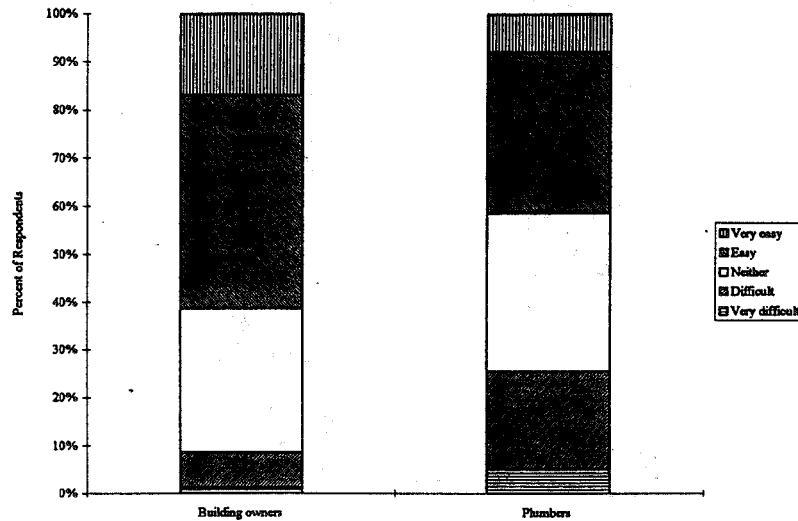


Exhibit 3-35 Dropping Off Toilet by Respondent Category**3.10.4 Inspection Process**

Plumbers reported much more difficulty with the inspection process than did building owners/managers, as shown in Exhibit 3-36. Nine percent of responding building owners/managers found the inspection process difficult or very difficult, while 26 percent of plumbers expressed this opinion. These findings for the plumbers on the inspection process and the process for dropping off the old toilets contrast with their overall opinions on the program.



Exhibit 3-36 Inspection Process by Respondent Category



3.11 Factors for Choice of Toilets

Single family homeowners and multi-family building owners were asked about the importance of four factors – price, quality, availability, and the plumber’s recommendation – in their choice of low flow toilets. Both homeowners and building owners considered quality to be the most important factor, with the highest percentages, 96 percent, of “important” or “very important” responses. Homeowners reported a virtual tie in this measure, at 88 percent, of importance among the other three factors. Building owners reported differences among the other three factors: the plumber’s recommendation was second at 91 percent, availability was third at 87 percent and price was fourth at 74 percent. This ordering of the four factors importance held when the building owners’ responses were broken out by technology type (Exhibit 3-38) and toilet make and model (Exhibit 3-39, showing the three most common brands).



Exhibit 3-37 Factors in Choice of Toilets by Respondent Category

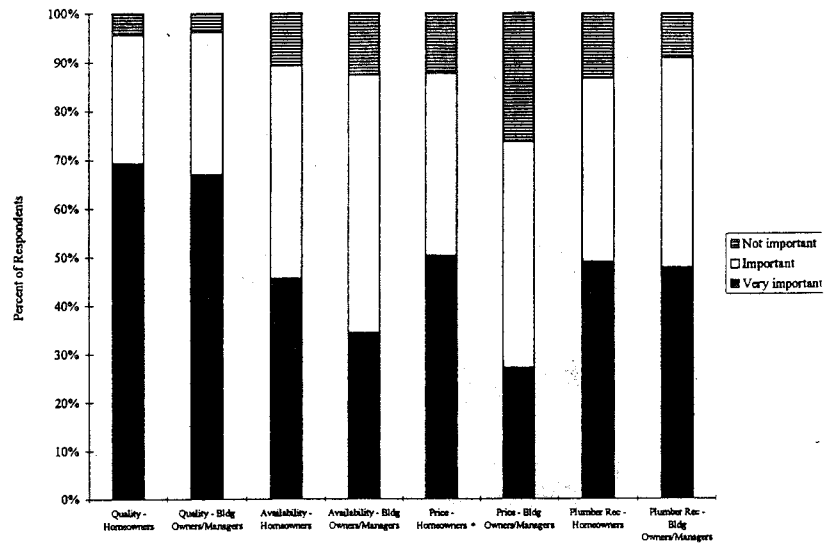
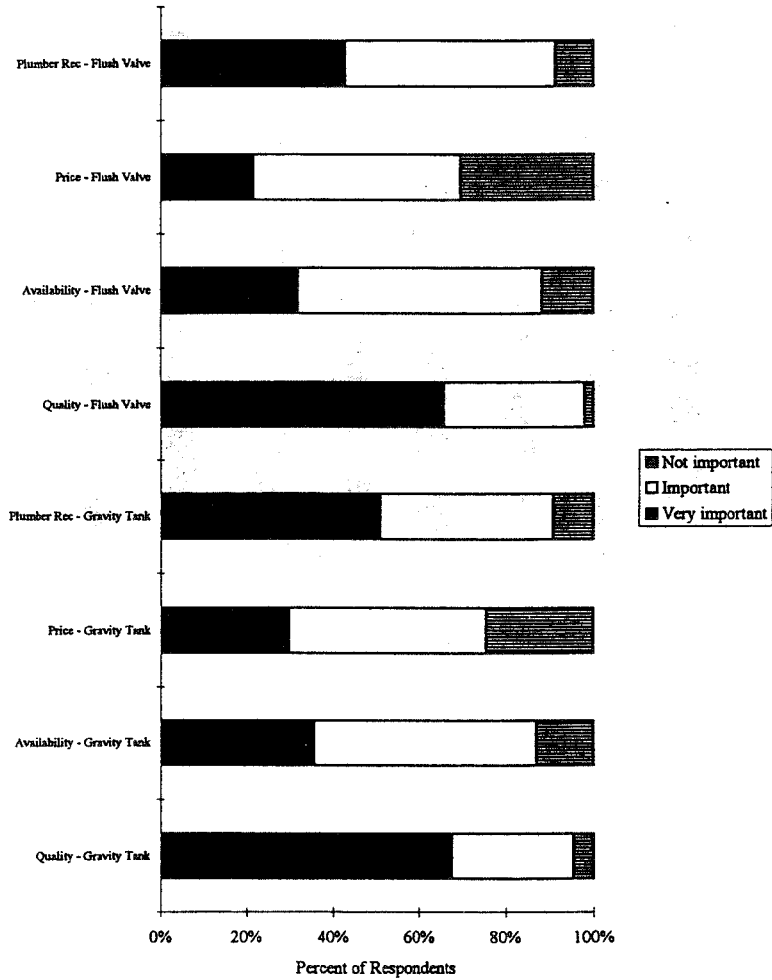
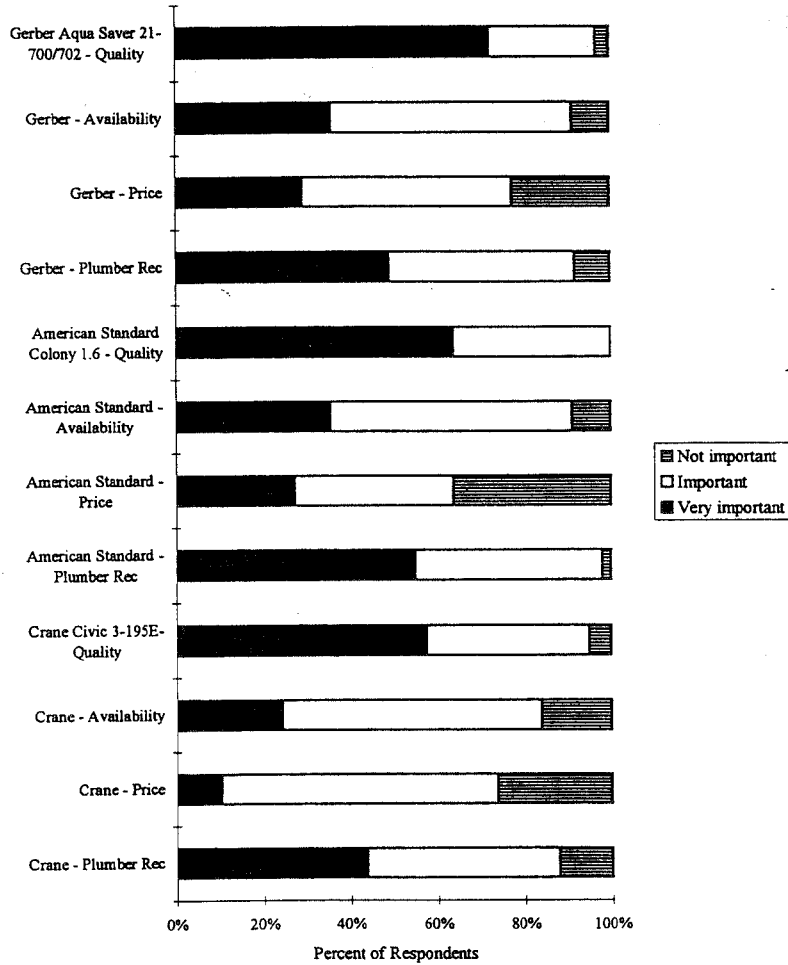


Exhibit 3-38 Factors in Choice by Technology Type (Building Owners and Managers Only)

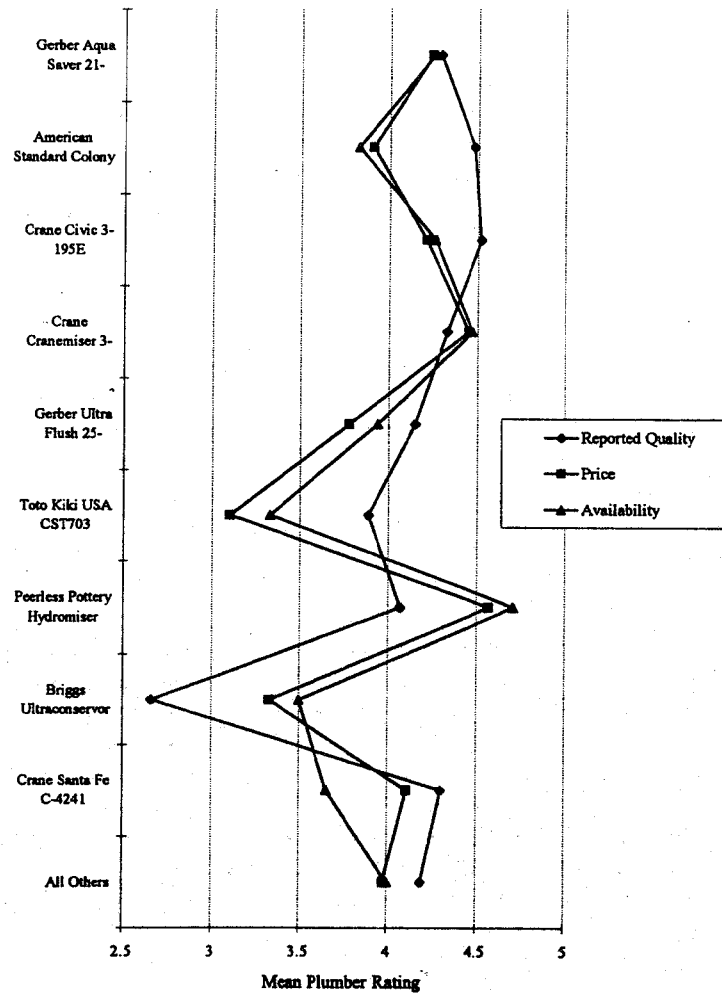


**Exhibit 3-39 Factors in Choice of Toilets - Three Most Common Toilet Makes and Models
(Building Owners and Managers Only)**

An issue related to the factors in the choice of toilets is the plumber's ratings of the toilets. Plumbers were asked to rate each toilet make and model on a scale from 1 to 5 (5 = excellent) with respect to reported quality, price and availability. Exhibit 3-40 summarizes the results. The plumber's price and availability ratings are very close to each other, for nearly all brands. Most brands received an average quality rating between 4.0 and 4.5; the two exceptions are the Toto Kiki USA CST 703 at 3.9 and the Briggs Ultraconservor 4775 at 2.7. The plumbers and the residents who are using the toilets are in agreement in their assessment of the Briggs, but disagree on the Toto Kiki.



Exhibit 3-40 Factors in Choice of Toilets - Mean Plumber Rating by Make and Model



4. COMPARISONS WITH RELATED SURVEYS

Westat compared this New York City survey with a similar study conducted in Los Angeles, *A Survey of Ultra-Low-Flush Toilet Users*, conducted by the Wirthlin Group for the Los Angeles Department of Water and Power. Comparing this study with Westat's Customer Satisfaction Survey is limited by several factors. The respondent base is different: Westat surveyed building owners/managers and plumbers along with apartment residents and homeowners. The geographic and cultural differences between the Los Angeles area and New York should also be taken into consideration. In comparing the two studies, a few commonalities were found.

The commonalities are very general. For both studies, the Toto Kiki USA CST 703 toilet had the highest mean customer satisfaction rating. In the Los Angeles study the Toto Kiki USA CST 703 was the second most common toilet installed. In Westat's New York study, the Toto Kiki was fourth most common toilet installed for apartment residents and the second most common installed for homeowners. The studies had no other toilets in common that were called out in the report. Interestingly, in the February 1995 issue of *Consumer Reports*, the Toto Kiki USA CST 703 was rated 18th out of the 32 models evaluated. Its overall score was good, but it was given low marks in waste removal and soiling.³ The Consumer Reports rating is interesting, when the Toto Kiki USA CST 703 tended to be rated higher than other toilet models throughout the New York and Los Angeles studies on factors such as double flushing and clogging.

In general for both reports the respondents paralleled each other's responses, even though the toilet makes and models were not exactly the same. Double flushing occurred more frequently with the new low flow toilets than the old toilets. The frequency of cleaning was about the same for old and new toilets. The frequency of clogging or plunging was also similar in both studies, where respondents reported a greater frequency of with the new toilets.

Below is a list of sources of other "Customer Satisfaction" reports for further reference, including the Los Angeles report mentioned above.

³ Low-Flow Toilets. (1995, February). *Consumer Reports*, pp. 121-124.



"A Survey of Ultra-Low-Flush Toilet Users"
DWP Water Conservation Publications
Los Angeles Department of Water and Power
Box 111 - Room 1348
Los Angeles, CA 90051

"Toilet Customer Satisfaction Survey"
William P. McDonnell
Public Affairs and Conservation Division
Metropolitan Water District of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

"An Informal Survey of Water Efficiency Professionals Concerning Preferred Water-Efficient
Toilet and Showerhead Models"
Warren Liebold
New York City Department of Environmental Protection
Bureau of Customer and Conservation Services - 13th Floor
59-17 Junction Boulevard
Corona, New York 11368-5107
or wliebold@pppmail.nycer.net



APPENDIX A
SURVEY INSTRUMENTS



Le hemos enviado dos formularios indenticos. Uno en Inglés y otro en Español.



Dear Resident:

Since March 1994, the New York City Department of Environmental Protection has been offering rebates to property owners who replace old water-wasting toilets and showerheads with new, water-conserving models. This Program has replaced 400,000 toilets to date and is helping to save tens of millions of gallons of water each day. This keeps water bills down and helps to preserve our water quality as well. Your building participated in the Program during the last several months.

There are a large number of different toilets being installed in the Program and we want to learn more about people's satisfaction and perceptions of their toilet's performance. Your responses are important to us, so please take a few moments to answer these few questions. Of course, your responses will be kept confidential. Thank you for your participation.

Sincerely,

A handwritten signature in black ink, appearing to read 'Marilyn G. Gelber', followed by a horizontal line.

Marilyn G. Gelber
Commissioner
New York City Department of Environmental Protection



Printed on Recycled Paper

**NEW YORK CITY TOILET REBATE PROGRAM
CUSTOMER SATISFACTION SURVEY**

INSTRUCTIONS:

Please answer all the questions by putting a check mark ☒ in the most appropriate box.

1. Was a new toilet installed in your apartment during the last few weeks or months?

Yes ☐1

No ☐2

⇒ (Thank you. You do not need
to complete the survey.)

2. Compared to your old toilet, do you need to "double flush" (flush twice in a row) your new toilet...

more often, ☐1

less often, or ☐2

about the same? ☐3

3. Do you need to "double flush" your new toilet...

almost never, ☐1

once a month, ☐2

once a week, ☐3

once a day, or ☐4

every time? ☐5

4. How often did you need to "double flush" your old toilet?

Almost never ☐1

Once a month ☐2

Once a week ☐3

Once a day ☐4

Every time ☐5

5. Compared to your old toilet, do you clean your new toilet...

more often, ☐1

less often, or ☐2

about the same? ☐3

6. Do you have problems with clogging with your new toilet?

Hardly ever..... ☐1
Once a month ☐2
At least once a week ☐3
At first, but no more..... ☐4

7. In the last year, how often did you have clogging problems with your old toilet?

Hardly ever..... ☐1
Once a month ☐2
At least once a week ☐3
At first, but no more..... ☐4

8. Have you had any mechanical problems with your new toilet?

None ☐1
Few ☐2
Some ☐3
Many ☐4

9. How often did you have mechanical problems with your old toilet?

Hardly ever..... ☐1
Once a month or less..... ☐2
More than once a month ☐3

10. How does the new toilet compare with the old toilet in terms of its appearance?

Nicer appearance..... ☐1
Worse appearance ☐2
About the same ☐3

Continue →

11. Did installation of the new toilet cause you or your family any serious inconveniences?

Yes☐1
No.....☐2

Comments:

THANK YOU FOR YOUR RESPONSES

Mail the questionnaire in the enclosed postage paid envelope.

If the envelope is missing mail to:

Westat, Inc.
Attn.: TRP Survey, TB 354
1650 Research Boulevard
Rockville, Maryland 20850

{PLACE ID BARCODE LABEL HERE}

Le hemos enviado dos formularios indenticos. Uno en Inglés y otro en Español.



Dear Home Owner:

Since March 1994, the New York City Department of Environmental Protection has been offering rebates to property owners who replace old water-wasting toilets and showerheads with new, water-conserving models. This Program has replaced 400,000 toilets to date and is helping to save tens of millions of gallons of water each day. This keeps water bills down and helps to preserve our water quality as well. Your household participated in the Program during the last several months.

There are a large number of different toilets being installed in the Program and we want to learn more about people's satisfaction and perceptions of their toilet's performance. Your responses are important to us, so please take a few moments to answer these few questions. Of course, your responses will be kept confidential. Thank you for your participation.

Sincerely,

A handwritten signature in black ink, appearing to read 'Marilyn G. Gelber', followed by a horizontal line.

Marilyn G. Gelber
Commissioner
New York City Department of Environmental Protection



Printed on Recycled Paper

**NEW YORK CITY TOILET REBATE PROGRAM
HOME OWNER'S SURVEY**

INSTRUCTIONS:

Please answer all the questions by putting a check mark ☒ in the most appropriate box.

1. Which of the following best describes the property you own.

Single family detached..... ☐1
Two-family house or duplex..... ☐2
Townhouse or rowhouse..... ☐3
Some other type?..... ☐4
(Please specify) _____
2. Were the old toilets that were replaced installed before or after 1980?

Old toilets installed before 1980.. ☐1
Old toilets installed after 1980..... ☐2
Don't know..... ☐3
3. Compared to your old toilet, do you need to "double flush" (flush twice in a row) your new toilet...

more often,..... ☐1
less often, or..... ☐2
about the same?..... ☐3
4. Do you need to "double flush" your new toilet...

almost never,..... ☐1
once a month,..... ☐2
once a week,..... ☐3
once a day, or..... ☐4
every time?..... ☐5
5. How often did you need to "double flush" your old toilet?

Almost never..... ☐1
Once a month..... ☐2
Once a week..... ☐3
Once a day..... ☐4
Every time..... ☐5

6. Compared to your old toilet, do you clean your new toilet...

more often, ☐1
 less often, or ☐2
 about the same? ☐3

7. Do you have problems with clogging with your new toilet?

Hardly ever ☐1
 Once a month ☐2
 At least once a week ☐3
 At first, but no more ☐4

8. Did you have any problems with clogging with your old toilet?

Hardly ever ☐1
 Once a month ☐2
 At least once a week ☐3

9. In the last year before you replaced your old toilet, how many times did you have your sewer line unclogged by a plumber or "rooter" company?

Never ☐1
 Once ☐2
 Twice ☐3
 More than twice ☐4

10. How many times has your sewer line been unclogged by a plumber or "rooter" company since replacing your old toilet?

Never ☐1
 Once ☐2
 Twice ☐3
 More than twice ☐4

11. Have you had any mechanical problems with your new toilet?

None ☐1
 Few ☐2
 Some ☐3
 Many ☐4

Continue→

12. How satisfied were you with the service of your plumber?

Very dissatisfied.....☐1
 Dissatisfied.....☐2
 Neither dissatisfied nor satisfied..☐3
 Satisfied.....☐4
 Very satisfied☐5

13. How difficult was it to fill out the rebate application?

Very difficult.....☐1
 Difficult.....☐2
 Neither difficult nor easy☐3
 Easy.....☐4
 Very easy.....☐5

Comments:

14. How important was each of the following factors in your choice of toilet?

	<u>Very Important</u>	<u>Important</u>	<u>Not at all Important</u>
Quality.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Availability	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Price	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Plumber's recommendation.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

15. How satisfied are you generally with the Toilet Rebate Program?

Very dissatisfied.....☐1
 Dissatisfied.....☐2
 Neither dissatisfied nor satisfied.....☐3
 Satisfied.....☐4
 Very satisfied☐5

THANK YOU FOR YOUR RESPONSES

Mail the questionnaire in the enclosed postage paid envelope.
 If the envelope is missing mail to:

Westat, Inc.
 Attn.: TRP Survey, TB 354
 1650 Research Boulevard
 Rockville, Maryland 20850

{PLACE ID BARCODE LABEL HERE}

Le hemos enviado dos formularios indenticos. Uno en Inglés y otro en Español.



Dear Building Owner/Manager:

Since March 1994, the New York City Department of Environmental Protection has been offering rebates to property owners who replace old water-wasting toilets and showerheads with new, water-conserving models. This Program has replaced 400,000 toilets to date and is helping to save tens of millions of gallons of water each day. This keeps water bills down and helps to preserve our water quality as well. Your building participated in the Program during the last several months.

There are a large number of different toilets being installed in the Program and we want to learn more about people's satisfaction and perceptions of the toilets' performance. Your responses are important to us, so please take a few moments to answer these few questions. Of course, your responses will be kept confidential. Thank you for your participation.

Sincerely,

A handwritten signature in black ink, appearing to read 'Marilyn G. Gelber', followed by a horizontal line.

Marilyn G. Gelber
Commissioner
New York City Department of Environmental Protection



Printed on Recycled Paper

**NEW YORK CITY TOILET REBATE PROGRAM
BUILDING OWNER/MANAGER SURVEY**

INSTRUCTIONS:

Please answer all the questions by putting a check mark ☒ in the most appropriate box.

We are asking questions in reference to your building at: {place label with building information here}

1. Which of the following best describes this property?

A rent controlled, subsidized, or stabilized
apartment building ☐1
A rental apartment building that is not rent
controlled or stabilized..... ☐2
A cooperative or condominium building..... ☐3
Something else? ☐4
(please specify) _____

2. Were the old toilets that were replaced installed before or after 1980?

Old toilets installed before 1980.. ☐1
Old toilets installed after 1980..... ☐2
Don't know ☐3

3. Have any of your tenants reported problems with clogging with their new toilets?

None ☐1
Few ☐2
Some ☐3
Many ☐4

4. Did any of your tenants report problems with clogging with their old toilets?

None ☐1
Few ☐2
Some ☐3
Many ☐4

5. How many times was your sewer line unclogged by a plumber or "rooter" company before you replaced the old toilets?

Never ☐1
Once ☐2
Twice ☐3
More than twice ☐4

6. How many times has your sewer line been unclogged by a plumber or replacing the old toilets?

Never ☐ 1
 Once ☐ 2
 Twice ☐ 3
 More than twice ☐ 4

7. Have you had any reports from tenants about mechanical problems with their toilets?

None ☐ 1
 Few ☐ 2
 Some ☐ 3
 Many ☐ 4

8. How difficult is it to fill out the rebate application?

Very difficult ☐ 1
 Difficult ☐ 2
 Neither difficult nor easy ☐ 3
 Easy ☐ 4
 Very easy ☐ 5

Comments:

9. How difficult do you find the process of dropping off the old toilets?

Very difficult ☐ 1
 Difficult ☐ 2
 Neither difficult nor easy ☐ 3
 Easy ☐ 4
 Very easy ☐ 5

Comments:

10. How difficult do you find the inspection process?

Very difficult ☐ 1
 Difficult ☐ 2
 Neither difficult nor easy ☐ 3
 Easy ☐ 4
 Very easy ☐ 5

Comments:

Continue →

11. Who chose the toilet make and model?

Self ☐1
 Plumber ☐2
 Someone else ☐3
 (Please specify) _____

12. How important was each of the following factors in your choice of toilet?

	Very Important	Important	Not at all Important
Quality.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Availability	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Price	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Plumber's recommendation.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

13. How satisfied are you with the service of your plumber?

Very dissatisfied..... ☐1
 Dissatisfied..... ☐2
 Neither dissatisfied nor satisfied.. ☐3
 Satisfied..... ☐4
 Very satisfied ☐5

14. How satisfied are you generally with the Toilet Rebate Program?

Very dissatisfied..... ☐1
 Dissatisfied..... ☐2
 Neither dissatisfied nor satisfied.. ☐3
 Satisfied..... ☐4
 Very satisfied ☐5

THANK YOU FOR YOUR RESPONSES

Mail the questionnaire in the enclosed postage paid envelope.
 If the envelope is missing mail to:

Westat, Inc.
 Attn.: TRP Survey, TB 354
 1650 Research Boulevard
 Rockville, Maryland 20850

{PLACE ID BARCODE LABEL HERE}

Le hemos enviado dos formularios indenticos. Uno en Inglés y otro en Español.

DEP

Dear Plumber:

Since March 1994, the New York City Department of Environmental Protection has been offering rebates to property owners who replace old water-wasting toilets and showerheads with new water-conserving models. This Program has replaced 400,000 toilets to date and saved over 1 billion gallons of millions of gallons of water each day. This keeps water bills down and helps protect the quality of water quality as well.

There are a large number of different toilets being installed in the Program. We want to learn more about people's satisfaction and perceptions of the toilets' performance. This information is important to us, so please take a few moments to answer these few questions. Of course, all responses will be kept confidential. Thank you for your participation.

Sincerely,

Marilyn G. Gelber

Marilyn G. Gelber
Commissioner
New York City Department of Environmental Protection



Printed on Recycled Paper

**NEW YORK CITY TOILET REBATE PROGRAM
PLUMBERS SURVEY**

INSTRUCTIONS:

Please answer the questions by writing in the response or by putting a check mark ☒ in the most appropriate box.

1. Which toilet makes and models have you been installing during this program?

	<u>MAKE</u>	<u>MODEL</u>
a.	_____	_____
b.	_____	_____
c.	_____	_____
d.	_____	_____
e.	_____	_____

2. On a scale from one to five, with five being excellent, how would you rate each of these toilets listed above on the following factors? Place the number in the appropriate row and column.

Make/Model	Reported Quality from Customers	Price	Availability
a. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
c. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
d. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
e. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>

Have any of your customers reported problems with clogging with their new toilet?

	Make/Model	None	Few	Some	Many
a.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
b.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
c.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
d.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
e.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

4. Have you had any reports from customers about mechanical problems with their new toilets?

	Make/Model	None	Few	Some	Many
a.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
b.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
c.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
d.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
e.	_____	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

5. Approximately what percentage of your business is currently associated with the Toilet Rebate Program?

0 - 10%.....	<input type="checkbox"/> 1
11% - 20%.....	<input type="checkbox"/> 2
21% - 30%.....	<input type="checkbox"/> 3
31% - 40%.....	<input type="checkbox"/> 4
41% - 50%.....	<input type="checkbox"/> 5
Over 50%	<input type="checkbox"/> 6

6. How difficult is it to fill out the rebate application?

Very difficult.....	<input type="checkbox"/> 1
Difficult.....	<input type="checkbox"/> 2
Neither difficult nor easy.....	<input type="checkbox"/> 3
Easy	<input type="checkbox"/> 4
Very easy.....	<input type="checkbox"/> 5

Continue →

7. How difficult do you find the process of dropping off the old toilets?

- Very difficult..... ☐1
 Difficult..... ☐2
 Neither difficult nor easy ☐3
 Easy ☐4
 Very easy..... ☐5

8. How difficult do you find the inspection process?

- Very difficult..... ☐1
 Difficult..... ☐2
 Neither difficult nor easy ☐3
 Easy ☐4
 Very easy..... ☐5

9. How satisfied are you generally with the toilet rebate program?

- Very dissatisfied..... ☐1
 Dissatisfied..... ☐2
 Neither dissatisfied nor satisfied..... ☐3
 Satisfied..... ☐4
 Very satisfied ☐5

THANK YOU FOR YOUR RESPONSES

Mail the questionnaire in the enclosed postage paid envelope.

If the envelope is missing mail to:

Westat, Inc.
 Attn.: TRP Survey, TB 354
 1650 Research Boulevard
 Rockville, Maryland 20850

{PLACE BARCODE LABEL HERE}

Mr. BARTON. Again subject to the minority approval at staff level without objection.

The program that you just alluded to, that was not mandated by this Federal law. The State and city of New York were doing that before we passed this legislation, is that not correct?

Mr. WHALEN. We passed low flow water legislation in New York City in 1992 which was effective in 1993. The first area that did this was in 1990 in Massachusetts, was the first State to do it, but in fact to answer your question, yes. It was mandated by the city, but it was voluntary for the homeowner to then replace them. The caveat on that was if you did an alteration in your home or you built a new home, you had to use a 1.6 gallon toilet.

[The prepared statement of George V. Whalen follows:]

PREPARED STATEMENT OF GEORGE WHALEN ON BEHALF OF THE PLUMBING-HEATING-COOLING CONTRACTORS—NATIONAL ASSOCIATION

Good afternoon Mister Chairman, members of the Committee. My name is George Whalen and I am here today on behalf of the Plumbing-Heating-Cooling Contractors—National Association. Thank you for the opportunity to present my testimony.

I am here today to speak in opposition to H.R. 623. For 37 years, I served as the President and Executive Director of the Plumbing Foundation of the City of New York, a trade association representing contractors, unions, and wholesalers.

City of New York—Rebate and Retrofit Program

While with the Foundation, I had the opportunity to work with the New York City Department of Environmental Protection to develop and implement the largest and most successful toilet rebate and retrofit program in the nation. This program has been a resounding success with residents, building owners and managers, the plumbing industry, the city's water purveyors, and local, state and federal officials.

NYC has long been recognized as having one of the world's most successful water supply systems, both in terms of quantity and quality. That supply, however, was not infinite and beginning in 1991, the City of New York recognized the need protect its water resources. High usage and summertime drought conditions had forced the city's reservoirs to dip dangerously low and had placed unreasonable demands on both the city's clean water needs and its capacity to treat wastewater. It is important to remember that each gallon of water consumed in New York City equals at least a gallon that needs to be treated by one of the city's 14 sewerage plants, four of which at the time were operating at or above capacity. At the time, the estimate for upgrading the city's wastewater treatment capacity to meet current and future needs was expected to cost more than \$10 billion in federal, state and city money.

The City of New York was not alone in experiencing increased water usage and wondering how it would meet the rising cost of wastewater treatment. And finding clean, potable water wasn't the biggest problem. I have worked on projects for California, Florida, Maryland and Massachusetts, as well as the cities of Philadelphia, Atlanta, Duluth, Minnesota and Portland, Oregon, all of which were facing stresses on their abilities to meet their wastewater treatment needs. In fact, some areas of the country, including New York City, were threatening building moratoriums in order to reduce wastewater treatment demands.

Tapping into new water sources was unjustifiably expensive, and would not address the city's long-term environmental needs. The city needed a solution that would address both challenges—reducing the city's demand for clean water and reduce the amount of water needing treatment.

Prior to the early 1990's, the majority of New York City's toilets used 3.5-5 gallons of water per flush. Not a significant amount of water in itself.

But, consider the total toilet population of the city and the frequency with which they were flushed and very quickly you realize the amount of water being consumed is no longer insignificant. The toilet rebate and retrofit program eventually adopted by the city was an innovative and effective plan that would address the city's clean water and wastewater treatment needs.

The terms of the program were simple. The city offered a rebate of up to \$240.07 on the installed cost for the replacement of an outdated, water-guzzling toilet with a modern, low consumption toilet. Additional replacements in the same household were eligible for a \$150.07 rebate. Commercial replacements qualified for \$150.07 per unit. A couple of caveats ensured the program's success:

- at least 70% of the toilets in each building had to be replaced before the owner is eligible for the rebate
- only models tested and approved by the State could be installed, and
- the installation must be completed by a licensed plumbing contractor

This public-private partnership succeeded because of the credibility of the program among the city's building owners and the licensed plumbing contractors working in the city's 2.3 million households. It could not have worked without their support.

I'd like to share some impressive facts about New York City's toilet rebate and retrofit program with you:

- 1,300,000 toilets were replaced in the first 25 months of the program, an average of 12,500 toilets a week
- The City of New York has reduced the flow of water through its sewerage treatment plants by 80 million gallons a day or 2.8 billion gallons a year.
- The City of New York replaced 1.3 million toilets at a cost of \$290 million but saved the City \$ 3 billion in water and wastewater treatment expansion costs.
- The average household in NYC is saving \$70 annually on its water and sewer bills, which are combined in the City of New York.
- Water consumption was reduced by 29%.

The continued use of low consumption toilets is a wise and prudent move that will ensure future generations have access to clean, potable water.

H.R. 623 is Poor Public Policy

H.R. 623 counters every energy and natural resources conservation and efficiency message Congress has ever sent!

H.R. 623 is bad for the environment. Water is our most precious natural resource. It is expensive and in limited supply. Water is everyone's problem—not just those who happen to live in certain areas of the country. Water-conserving plumbing products can save millions of gallons of water every day; Water that could be better used in other capacities.

H.R. 623 is bad for the business community. If enacted, H.R. 623 could limit growth in your congressional district! Limiting growth could restrict the economy—that's not good.

Our country's wastewater treatment facilities are already severely overburdened. Many areas of the country are considering (or have considered) building moratoriums and other growth-limiting restrictions because they cannot meet current or expected wastewater treatment needs. Less water used in our plumbing systems means less water that has to be treated! And wastewater plants that don't have to be expanded!

H.R. 623 is bad for America's consumers. The flushing of toilets accounts for nearly 40% of all water consumed in the average house. Every day we flush more than 5 billion gallons of water down the drain.

Experts say that's about 1.5 billion (yes, billion) gallons of water more than necessary. Switching to water-efficient plumbing fixtures could save the average household as much as \$50 to \$100 a year on water and wastewater treatment bills. Water down the drain is money down the drain.

Consumers will also feel the negative effects of this legislation when their wastewater treatment facilities fail to meet their community's needs and they are forced to pay millions, and sometimes billions, of tax dollars to build new treatment facilities. Their sewer charges could double within 3 years.

Negative Effect on the Plumbing Industry

The plumbing industry supports the national efficiency standards contained in current law. The flow rates and flush volumes enacted in the 1992 Act were developed through the voluntary standard-setting process. The same standards had also been adopted by many states prior to the enactment of the Act.

A single federal, low consumption requirement is both necessary and practical. A single standard allows products to move freely across state lines, without the industry having to produce, stock, deliver and install different products based on a variety of state or local consumption requirements. This in turn helps to control consumer prices for plumbing products.

Should Congress repeal the current federal standards by passing H.R. 623, the efficiencies and economies of the present regulatory framework will be lost. Our industry will be forced to comply with possibly 50 different state standards, 50 different test procedures, 50 different certification requirements, and a different building code for every town, county and state in which they work.

Water-efficient technology is vastly improved from where it was several years ago. The fact is that there are excellent 1.6 gallon per flush (gpf) toilets on the market

today. Toilet hardware, not the units themselves, is sometimes to blame for poor performance. Toilets must be properly installed. Licensed plumbing contractors who properly install the 1.6 gpf fixtures rarely get complaints. Plumbing contractors will install products that work because warrantee callbacks are costly.

If you believe improvements can be made in the efficiency or performance of the 1.6 gpf toilets mandated in the 1992 Energy Policy Act, we urge you to work with our organization and the plumbing industry to bring your concerns before American National Standards Institute's (ANSI) approved voluntary consensus standardization process with jurisdiction over this matter. ANSI is a private, non-profit membership organization that coordinates the U.S. voluntary consensus standard system.

The plumbing industry supports the voluntary consensus standard process that develops and governs standards ranging from aerospace engineering to zirconium production and from crayons to nuclear safety to plumbing. The plumbing industry also supports water efficient plumbing standards that reduce water consumption and assure states and communities a reliable supply of efficient and affordable plumbing fixtures.

Let's keep the government out of our bathrooms and put the experts back in charge!

Mr. BARTON. Mr. Goike, we welcome you to the committee. Your statement is in the record.

STATEMENT OF DAVID GOIKE

Mr. GOIKE. Thank you. I would like to enter into the hearing a letter addressed to you with two copies from the President of TOTO, U.S.A.

Mr. BARTON. Without objection.

[The information referred to follows:]

TOTO
July 22, 1999

The Honorable JOE BARTON
Chairman
Subcommittee on Energy and Power
Committee on Commerce
U.S. House of Representatives
Washington, DC 20515

DEAR MR. CHAIRMAN: Please accept this statement of TOTO USA for the record of the hearing of the Subcommittee on Energy and Power on H.R. 623, the bill to repeal the current uniform national water efficiency standards for plumbing products. TOTO USA is strongly in support of current law, and is opposed to the enactment of H.R. 623.

TOTO USA is a manufacturer of vitreous china plumbing products, including water closets and urinals subject to the national standards enacted in 1992. TOTO USA is a subsidiary of TOTO Ltd. of Japan, the largest manufacturer of plumbing products in the world. We serve the US market from two manufacturing plants in Atlanta and Morrow, Georgia. Our Morrow plant opened in 1996, and with its advanced pressure casting technology, it is the most modern and productive vitreous china manufacturing plant in North America.

TOTO is known throughout the world for its engineering expertise, and we have applied our engineering resources to meet the challenge of producing fully functional, gravity-operated toilets that consistently perform well at 1.6 gallons-per-flush. By giving careful attention to both design innovation in the research phase and quality control in the manufacturing process, TOTO is able to produce high quality toilets in large volumes and at moderate prices.

TOTO products have been well received by American consumers. In its 1995 survey of ultra-low-flush toilet users in Los Angeles, the Wirthlin Group reported that more purchasers were satisfied with TOTO USA's CST 703 than with any other brand identified in the survey. In surveys of participants in New York City's landmark toilet rebate program of 1994-96, the CST 703 was again found to have produced the highest level of customer satisfaction measured for any toilet in the program. More recently, TOTO's two-piece and one-piece models have both been rated as "Best Buys" by Consumer Digest Magazine.

H.R. 623 appears to be based on the mistaken notion that it is not possible to produce reasonably priced toilets that consistently please consumers while operating

on only 1.6 gallons-per-flush. We most respectfully disagree. Our business in the United States is built around doing just that. And we have invested in the plant, equipment, and people necessary to produce top quality plumbing products with the conviction that competition in the American marketplace will reward those who can meet this challenge.

We are pleased that our products are contributing to the conservation of America's natural resources and to the reduction of capital costs for water and wastewater infrastructure in American communities. This is a role that our company and our employees would like to continue. We urge you not to turn back the clock on water saving-technology. We urge that H.R. 623 not be enacted.

Sincerely,

TOSHIO KITANO
President, TOTO USA

cc: The Hon. Mac Collins, M.C.
The Hon. John Lewis, M.C.

Mr. GOIKE. Good afternoon, Mr. Chairman and members of the committee. My name is David Goike and I am here on behalf of the Plumbing Manufacturers Institute, a national trade association of companies that produce the Nation's finished plumbing, fitting and fixtures, along with a variety of other plumbing products. Thank you also for the opportunity to testify.

I am here to present PMI's strong opposition to H.R. 623 legislation. PMI works with model code agencies, States and local jurisdictions to promote uniformity in plumbing codes. PMI also teams up with national and Federal groups such as the American National Standards Institute and the Department of Housing and Urban Development to formulate and update plumbing standards for materials, performance and installation requirements.

In these roles, PMI and its members are in a unique position to measure the effect of EPAct. We believe that this law has been successful in conserving water while establishing national standards for plumbing fixtures which have resulted in significant savings for consumers and municipalities. We are at a loss to see why Congress would consider reversing these successes at this time. The provision in EPAct mandating low-flow fixtures passed the House, as previously stated, by a bipartisan vote of 328 to 79. These provisions have begun to realize their enormous potential to help the environment while costing the taxpayers, consumers and the government virtually nothing. It is rare that a Federal law accomplishes so much and costs so little.

PMI's active promotion of water conservation in plumbing systems dates to the early 1970's, when our members began working on product standards for low flow faucets and showerheads. In the 1980's, our members worked on products standards for low flow water closets. The plumbing industry has answered a vital public policy need by developing products requiring the use of less water.

I have a study which has been passed out, *Saving Water, Saving Dollars*. I am not going to read the testimony because it has been given. There is a 15 percent savings of interior residential water use with just 1.6 gallon toilets alone, and it further documents savings of as much as 30 percent of interior residential water use if all plumbing products of EPAct are applied. Such huge savings on the water supply side translate as well to substantial savings in the cost of waste water infrastructure systems as well.

Those advocating the repeal of the plumbing provisions in EPAct have sought to diminish and politicize a significant and somewhat

historic consumer and environmental victory. Repeal advocates charge that 1.6 gallon flush toilets don't work and claim a broad consumer rebellion against these legislative standards.

Gentlemen, we are here to tell you that simply is not true. The report I cited earlier, *Saving Water, Saving Dollars*, concludes that plumbing products, including 1.6 gallon toilets, work well and save water. And again I am not going to bother because the testimony that I had prepared talks about the cities we have already covered, San Diego, Austin, Tampa, where over 90 percent of the consumers were very satisfied with 1.6 gallon toilets. There were several other cities in this report where the user satisfaction is extremely high.

Two other facts which I think I would like to point out is that the 25 million 1.6 gallon flush toilets installed as of 1998 were saving on average 29 gallons of water per day in single family homes and 48 gallons per day in apartment units. Another fact, the water cost savings from 1.6 gallon flush toilets alone amount to \$50 per year to consumers with an average water and sewer bill, even more in high-cost areas, as Mr. Whalen just testified, over \$70 in New York City.

The report further demonstrates that consumer choices would not change for the most part if plumbing product provisions of EPLA were repealed. State and local regulations exist because of a need to conserve water, not simply to satisfy the requirements of EPLA. When EPLA was signed into law, 48 percent of the U.S. Population lived in States already requiring the installation of 1.6 gallon flush toilets. Preexisting State laws would remain leaving about 17 States with low flow requirements in place, in addition to numerous municipalities which also required 1.6 gallon toilets.

What would change is the cost to the consumer. The economies of scale that allow costs to remain constant would be lost and consumers would end up paying more for their plumbing products.

In closing, permit me to remind the subcommittee that the plumbing product provisions of EPLA were inspired by a unique coalition of interests, including groups representing business, conservation, labor, consumers, environmentalists, water utilities and waste water treatment providers. We are here to preserve water for our children and grandchildren in the years ahead and to make plumbing fixtures less costly for consumers and to avoid unnecessary governmental regulatory costs. We see no reason to repeal and reverse this highly successful initiative.

Thank you for your efforts.

[The prepared statement of David Goike follows:]

PREPARED STATEMENT OF DAVID GOIKE, MASCO CORPORATION, ON BEHALF OF THE
PLUMBING MANUFACTURERS INSTITUTE

Good afternoon, Mr. Chairman and Committee Members. I appreciate the opportunity to testify before you and the Energy and Power Subcommittee today on this most important issue.

INTRODUCTION

The Plumbing Manufacturers Institute (PMI) is the national trade association of plumbing products manufacturers. Its member companies produce the nation's finished plumbing fittings and plumbing fixtures along with a variety of other plumbing products.

PMI works with model code agencies, states and local jurisdictions to promote uniformity in plumbing codes. PMI also teams up with national and federal groups

such as the American National Standards Institute and the Department of Housing and Urban Development to formulate and update plumbing standards for materials, performance and installation requirements.

WATER CONSERVATION—ALWAYS A HIGH PRIORITY

PMI's active promotion of water conservation in plumbing systems began in the early 1970s. The Institute and its members worked on product standards for low-flow faucets and showerheads. This effort culminated in 1979 when the American National Standard covering low water-consumption products was approved. Subsequently, PMI has been instrumental in seeking adoption of this standard and standards requiring low-flush volume toilets and urinals by states and local governments. Thus, it was no accident that PMI was an architect of the plumbing product provisions of EPAct '92.

ANSWERING THE NEED

The plumbing industry has answered a vital public policy need by developing products requiring the use of less water. Over the past 25 years, the federal government recognized the need for a comprehensive, nationwide water use and conservation policy. While a variety of regulations from such diverse federal agencies and departments as Housing and Urban Development, Agriculture, Energy and EPA have addressed some of the issues relating to long-term national potable water needs, a truly comprehensive policy does not yet exist.

THE NEED FOR PUBLIC WATER POLICY AND WATER CONSERVATION

The need for water conservation in private and public use should not be obscured by looking at a map of the United States showing the Great Lakes and other magnificent water resources, nor can average rainfall be used as an indicator of the areas where water conservation is required. The need to save potable water—the water that is suited for human consumption—exists in virtually every area of the U.S.

Potable water is expensive water, *increasingly* expensive. Typically, potable water comes from a source where a substantial capital expenditure is required to gather and hold the water (i.e., ground water or surface water from man-made reservoirs). The raw water must be transported to a treatment plant, processed through treatment techniques, transported to the ultimate user and then must be transported to a wastewater treatment plant, treated, and finally transported again.

This process costs a great deal of money. Water, for a variety of reasons, has typically been underpriced. Utilities have been reluctant, historically, to charge enough for water to fully recover capital costs. In other words, there has been little set aside for infrastructure maintenance and expansion.

As the population expands and building developments increase, tremendous pressure is created on water and wastewater systems throughout the U.S. This occurs in areas that have enormous supplies of raw water as well as in arid lands. In addition to demand-related costs, utilities must also meet constantly expanding regulations concerning health-based concerns such as lead in drinking water.

U.S. EPA estimates, delivered to Congress in 1997, peg needed water and wastewater capital investments at \$280 billion in the next 20 years. Some of these funds will come from local users and the local tax base. A much larger portion of these funds will have to come from the federal government. This is money collected from every taxpayer in the U.S.

Congress should seize every opportunity to maximize taxpayers' investments. The report entitled, *Saving Water, Saving Dollars*, quotes studies documenting a 15 percent savings of interior, residential water use by the use of 1.6 gallons per flush (gpf) water closets alone. It further documents savings of as much as 30 percent of interior, residential water use, if all plumbing product provisions of EPAct '92 are applied along with the use of new, more efficient clothes washers.

Such savings on the water supply side translate to substantial savings on the wastewater infrastructure of systems as well. Water conservation in plumbing systems makes sense for many reasons, not the least of which is because it allows taxpayer dollars to be used more efficiently by government and utilities.

A QUADRUPLE WIN...

The plumbing product provisions of EPAct '92 exist because a unique coalition of interests worked in unison for the public good. Industry, labor, contractors, environmentalists and consumer groups, water suppliers and government all came together and agreed on how to achieve more efficient use of our water resources.

This is an example of legislature where there are few government programs where everyone wins. Now that the reality of water conservation has been documented by *Saving Water, Saving Dollars*, we can point out that the plumbing product provisions of EPAct '92 created a quadruple win...

... First, huge amounts of a precious, expensive resource are not being wasted and misused. The ramifications for all of us in the 21st century are enormous and positive. *Showcase a victory for the environment and our future!*

... Products meeting the federal requirements now cost little or no more than the same products did prior to 1993, when the requirements were enacted. So, the consumer benefits. The consumer benefits again because water and sewer bills are less in many instances because of the decreased usage. *Chalk up a consumer victory!*

... these plumbing products provisions have cost the federal government virtually nothing. Local and state governments have adopted the regulations into their plumbing codes, and plumbing inspectors are already enforcing them. The federal government spends virtually nothing administering the water conservation standards because standards development was left to the private sector that already had the capabilities to do the job. *Chalk up a victory for government and the taxpayer!*

... allowing manufacturers to concentrate on more important issues such as product improvement and foreign markets. *Tally a victory for industry!*

Summary: The plumbing product provisions of EPAct '92 have begun to realize their enormous potential to help the environment while costing taxpayers, our government and consumers virtually nothing. Lets face it—such a report card is rarely issued on government programs!

REALITY WILL CONTINUE TO MAKE EPACT '92 WORK

Prior to 1992, a number of states and local governments had identified the benefits of lower water use plumbing products as part of a strategy to save water and avoid capital costs for water and wastewater facilities. Many of these entities created their own, but differing, efficiency regulations in the absence of uniform federal requirements. Product manufacturers, distributors and installers had major problems meeting this patchwork of regulation. Literally, an installer of a 1.6 gallons per flush water closet could walk across the street to a different town and have to install one flushing on 1.5 gallons per flush.

The manufacturing, distribution, logistics and enforcement costs of this system were unnecessarily high. The consumer was paying more for products than would have been necessary under a unifying national standard.

WHY HAS EPACT '92 WORKED SO WELL?

Congress prudently created a target for product manufacturers and regulators but did not tell them how to meet the goal. The “how to” was left to the private sector and to existing institutions, such as the American National Standards Institute, that already knew how to do the job. The inherent competitiveness of the plumbing industry has been a major force in creating a “win-win” scenario under this law. Since 1992, products covered by the Act have increased in functionality, and they cost virtually no more than their predecessors did.

Plumbing product manufacturers today must meet the demands of the marketplace, and they are doing so, just as they have always done.

OTHER ISSUES

1) It has been asserted by detractors of EPAct '92 that the plumbing product provisions of the Act should be repealed so that consumers may have a “choice” as to how much water toilets use. The argument is illusory. First, one must recognize, as a practical matter, consumers in recent times have never had a choice as to how much water toilets used to flush. In the last 25 years, water closet flushing volume has evolved steadily downward for a variety of reasons from seven gallons per flush to the current 1.6 gallons per flush.

Consumers today can specify the same choices with respect to toilets as they did 25 years ago (i.e., color, shape and size of the bowl), with the exceptions of short periods of time when higher flushing generations of toilets were phased out of the market and the next lower flushing generation was phased in.

2) *Repealing the federal law will have minimal impact on the broad use and acceptance of water conservation plumbing products, but costs may very well increase needlessly.* The requirements of EPAct '92 are now firmly embedded in state and local law, and codes. They are being widely enforced. Most areas of the U.S., either before 1992 or after EPAct '92 was passed, have changed their own statutes and regulations to require water conservation plumbing products.

The model plumbing codes, upon which most state and local codes are based, have also changed requirements for water conservation products. It is our opinion, based on our knowledge of the market and the code development process, that few—if any—states and local jurisdictions would repeal regulations mandating the use of water conservation plumbing products.

What is bound to happen, however, is that states and local jurisdictions would move back to the pre-1992 situation in which they make “slight” changes in their regulations.

We cannot predict precisely how these localized regulations would change manufacturing, but we can report what happened prior to implementation of the federal requirements: in order to maintain efficiency and productivity, producers made all or most of their toilets, showerheads and faucets to the most stringent requirements in the national marketplace. This is, if state X required 1.3 gallons per flush toilets, all toilets were made to that standard by the manufacturer, generally speaking, it is more efficient to produce and distribute fewer models of a product.

It is ironic that repeal of the plumbing product provisions of EAct '92 would quite likely have exactly the opposite effect that H.R. 623 contemplates.

3) *Consumers are generally satisfied with the current generation of water conservation products.* The documentation of consumer acceptance and satisfaction contained in *Saving Water, Saving Dollars* should ease any congressional concerns. We have reviewed consumer complaint data from several major toilet manufacturers. The conclusion is that manufacturers receive no more complaints about 1.6 gallons per flush toilets than they did about 3.5 gallons per flush toilets. As a matter of fact, some have received fewer complaints on the 1.6 models.

4) *The alleged “black market” for older toilets is imaginary in its impact.* We asked toilet manufacturers to compare several years’ data of projected sales of toilets against actual sales for outlets near the Canadian border (Canada has no such 1.6 gallons per flush requirement). It was assumed that sales in these areas would suffer, if a black market for 3.5 gallons per flush toilets existed. Every reporting company indicated sales of 1.6 gallons per flush toilets along the Canadian border were at or above forecasts.

5) *Contrary to the battle cry of H.R. 623 sponsors, the government has been in your bathroom since the 1400s—ever since officials determined emptying chamber pots out the window into the street caused disease.* Plumbing installation is highly regulated at the state and local levels today, as it has been since the Middle Ages. The federal government also plays an increasing role in the regulation of plumbing products.

If the plumbing product provisions of EAct '92 were repealed, the federal government would still be in your bathroom through laws, regulations or policies of the Consumer Product Safety Commission, the EPA, the Department of Housing and Urban Development, and the Department of Justice (ADAAG). These citations do not include the important role of federal purchasing specifications in shaping product standards.

HOW CONGRESS CAN HELP

We believe there is a proper and very useful role for the Congress concerning the broad issues of water conservation and plumbing products.

The first part of that role is for Congress to foster and nurture a comprehensive review of water supplies and water use—to create a national water policy. Experts have been documenting the need to preserve water supplies for decades. Each Presidential administration since Jimmy Carter’s has made headlines over initiation of a comprehensive national policy, with conservation as an important part of the policy. We are now moving into the twenty-first century and still do not have a comprehensive water policy for this nation.

With respect to plumbing products, we wish to emphasize that the use of our industry products is only part of the necessary development of a comprehensive national water policy.

1) Section 337 of EAct '92 mandates the Secretary of the Department of Energy to carry out consumer education. If this obligation has been met at all, it has only been a minimal effort. The plumbing industry needs help from consumer and environmental groups, other interested parties and government in letting consumers’ needs, but they operate differently. *Congress could help cause government agencies to become part of the solution to consumer education issues.*

2) We believe that, over the long term, flow rates and flush volumes of plumbing products will continue to be driven downward because of the need to save water and energy. The products manufactured by our industry are the products the consumers see in their bathrooms and kitchens. Underlying these products is a complicated system of water delivery and waste disposal that, along with those products the con-

sumer actually uses, form the plumbing system. All portions of the overall system must function in harmony or serious problems effecting health and safety develop.

Within the federal government (at the National Institute for Standards and Technology) the expertise already exists to begin dealing with the longer-term plumbing system design issues inherent in the need to save water. *Coupling NIST with the American Society of Plumbing Engineers, representing the private plumbing system design professional and other groups, would position Congress in a strong leadership role solving twenty-first century water problems.*

While we believe H.R. 623 should not be passed, we also recognize that those supporting it have, by their efforts, helped focus attention on the need for a comprehensive national water policy. We invite the sponsors and supporters of H.R. 623 to work with the same coalition that created the plumbing product provisions in EPAct '92 to talk about water and the twenty-first century.

SUMMARY

The plumbing product provisions of EPAct '92 were created by a truly unique group of interests including business, labor, consumers, environmentalists, the water industry and government.

What they created has...

...saved precious water

...saved the consumer money

...cost the government virtually nothing to administer

...help the environment!!

Why would such an initiative be repealed?

Mr. BARTON. Thank you, sir. We would like to hear from Mr. Willardson. You are asked to summarize your statement.

STATEMENT OF ANTHONY WILLARDSON

Mr. WILLARDSON. Thank you, Mr. Chairman and members of the subcommittee. We appreciate the opportunity to testify on behalf of the council. The council is an organization of 16 States and the members are appointed by the Governors of those States. The council is opposed to the repeal of uniform national plumbing efficiency standards. I might add that is an unusual position for us to take to support Federal regulation, but in this case our States have had, many of them, the same standards before enactment of the Federal requirements.

The States of Arizona, California, Nevada, Oregon, Texas, Utah and Washington all had plumbing efficiency standards prior to the Federal requirements. The Federal requirements have been incorporated in their plumbing codes. Other States now depend on those standards. The State of New Mexico is one who again opposes repeal of those standards. Repeal would send—to us it is a question of conservation. It is an issue of conservation. The repeal of those standards would send the wrong message, that urban water conservation is not as important as it was.

We have seen significant water savings in different areas of the country. While it may not be perceptible nationwide, it is perceptible in the Los Angeles Basin and in the San Diego area, in Las Vegas, where they are reaching the limit of their water supply and are still building. The issue may come down if we can't reduce our water use, a building moratorium. The State of Arizona has closed many of their groundwater basins to further development. They have required a showing of a 100-year water supply before you can subdivide.

There are many water supply issues in the West, and we believe that one of the other major issues for those States that had standards is enforcement of those standards. The member from Arizona

remarked they wondered what they were going to do now that they were giving the standards from a State water agency. Were they going to home base, the local hardware stores to see what they were selling? The enactment of the Federal standards eliminated that tremendous regulatory problem for the States, and enactment of H.R. 623 and repeal of those standards would again place that burden on the States.

Also there is the issue of Federal funding, increasing the demands for Federal funding for infrastructure financing for water and waste water. We have heard that before. It would create a disproportionate burden on western States where we are limiting our water use and create a greater demand in other States that are not limiting their water use for those funds, for State revolving funds and others.

We have chosen to exercise the constraints. The State of California supports the Federal standards even though their standards were more stringent at the time that the Energy Policy Act was enacted in 1992.

There are other things that States can do and are doing to save water. This is an important issue to us and as I say, it is not one that was taken lightly. The discussion in our meetings among our States, and it was a unanimous adopted position, was enlightening. But it came down to the issue of supporting conservation and the regulatory burden that would be placed on the States if this act were repealed. Nevada was interesting. They wanted to know what the support was for repeal of the bill, if there was a National Association of Water Wasters.

Arizona has talked about their plumbing standards and how that is a base requirement for all of the cities in Arizona now, including the city of Phoenix. In Oregon, the State's administrative rules with respect to water allocation and conservation are all tied to their water efficiency standards and the plumbing codes. There are many—there would be tremendous repercussions if the national standards were repealed, and for that reason the issues of conserving water and for simplifying and reducing the burden on States of regulating water use, we oppose H.R. 623 and the repeal of national standards.

[The prepared statement of Anthony Willardson follows:]

PREPARED STATEMENT OF ANTHONY G. WILLARDSON, ASSOCIATE DIRECTOR,
WESTERN STATES WATER COUNCIL

Mr. Chairman and members of the Subcommittee: On behalf of the Western States Water Council, I appreciate this opportunity to testify on H.R. 623. The Council consists of representatives appointed by the governors of sixteen western states.

The Council is opposed to the repeal of the uniform national plumbing efficiency standards in the Energy Policy Act of 1992, as envisioned in H.R. 623. A resolution adopted by the Council to this effect is attached. The Council has always advocated and promoted the wise use of western water resources in general, and specifically appropriate water conservation measures. Making efficient and beneficial use of scarce water resources has been, and continues to be, a fundamental objective of western states' water policies.

Water agencies that have carried out retrofit programs to install higher efficiency fixtures have demonstrated substantial water savings from these programs. Between 1990 and 1992 the States of Arizona, California, Nevada, Oregon, Texas, Utah, and Washington adopted statewide standards for new plumbing products, including a standard of 1.6 gallons per flush (gpf) for toilets. Following action by these States and others, the Energy Policy Act of 1992 was enacted in October 1992 con-

taining uniform national water efficiency standards for plumbing products, including a standard of 1.6 gpf for toilets, with the active support of many water and wastewater utilities in the Western States. Other Western States subsequently incorporated comparable water efficiency standards into their plumbing codes.

Still other states now rely on the established federal standards, which if repealed, would leave a regulatory gap that could lead to substantial confusion and difficulties in enforcing current state standards for installation of water efficient fixtures. Uniform national efficiency standards simplify and reduce the States' burden of enforcement regarding the sale and installation of ultra-low flush toilets (ULFTs) and other water-efficient plumbing products. Moreover, uniform national efficiency standards maintain a national market for plumbing products, allowing manufacturers to achieve full economies of scale and encouraging wider competition in all jurisdictions.

Furthermore, repeal might be perceived as sending the wrong signal that urban water conservation is not as important now as a few years ago. Efficient plumbing products, including ultra-low flush toilets (ULFTs), became widely available in the early 1990's, and have undergone substantial product development and performance improvements since that time. The American Water Works Association Research Foundation (AWWARF) commissioned the most comprehensive end-use study of indoor water use ever undertaken in North America, recording indoor water usage in twelve cities, the majority located in the Western States. These AWWARF studies have documented *per capita* indoor water use reductions averaging over 30% in single-family homes equipped with water-efficient plumbing fixtures, fittings, and appliances currently on the market, compared to homes without such products.

With urban growth in the West and the difficulty in developing new water supplies to meet the needs of an expanding population, continuing water use efficiency will always be an important water conservation and management tool. Enactment of this legislation would increase the burden of enforcement on Western States and communities seeking to maintain efficiency standards for plumbing products, and will reduce the reliability and predictability of water savings resulting from such standards. Such legislation may also disadvantage those Western States seeking to maintain water efficiency standards for plumbing products as a disproportionate share of federal financial assistance for water and wastewater infrastructure in future years could be diverted to States choosing to make less efficient use of water by relaxing or repealing water efficiency standards for plumbing products.

In conclusion, the national standards highlight the importance of uniform requirements which contribute to the vital goal of conserving water and simplify and reduce the state burden of enforcement regarding the sale and installation of water efficient plumbing fixtures. The federal statute provides minimum standards, but if necessary and appropriate, states may still choose to exercise their authority to adopt more stringent requirements. We would appreciate your support in maintaining the existing national standards.

WESTERN STATES WATER COUNCIL
April 21, 1999
 Position No. 224

The Honorable TOM BILEY, *Chair*
House Commerce Committee
U.S. House of Representatives
2409 Rayburn House Office Building
Washington, DC 20515-4607

DEAR CHAIRMAN BILEY: On behalf of the Western States Water Council, which represents the governors of sixteen states, I am writing to express our opposition to the repeal of the uniform national plumbing efficiency standards in the Energy Policy Act of 1992, as envisioned in H.R. 623. A resolution adopted by the Council to this effect is enclosed. The Council has always advocated and promoted the wise use of western water resources in general, and specifically appropriate water conservation measures. Making efficient and beneficial use of scarce water resources has been, and continues to be, a fundamental objective of western states' water policies. Water agencies that have carried out retrofit programs to install higher efficiency fixtures have demonstrated substantial water savings from these programs.

While many western states have enacted their own plumbing efficiency standards and codes, others now rely on the established federal standards, which if repealed, would leave a regulatory gap that could lead to substantial confusion and difficulties in enforcing current state standards for installation of water efficient fixtures. Moreover, repeal might be perceived as sending the wrong signal that urban water con-

servation is not as important now as a few years ago. With urban growth in the West and the difficulty in developing new water supplies to meet the needs of an expanding population, continuing water use efficiency will always be an important water conservation and management tool.

The national standards provide uniform requirements that simplify and reduce the state burden of enforcement regarding the sale and installation of water efficient plumbing fixtures. The federal statute provides a minimum standards, but if necessary and appropriate, states may still choose to exercise their authority to adopt more stringent requirements. We would appreciate your support in maintaining the existing national standards.

Sincerely,

FRANCIS "FRITZ" SCHWINDT, *Chair*
Western States Water Council

cc: Western Congressional Delegation

Position No. 224

POSITION OF THE WESTERN STATES WATER COUNCIL REGARDING
WATER EFFICIENCY STANDARDS FOR PLUMBING PRODUCTS

Yakima, Washington, April 9, 1999

WHEREAS, making efficient and beneficial use of scarce water resources has been, and continues to be, a fundamental objective of the Western States; and

WHEREAS, the importance of water use efficiency continues to grow as the finite water resources of the Western States support increasing levels of population and economic activity; and

WHEREAS, new technology that makes more efficient use of water in its various applications offers significant economic and environmental benefits to the Western States; and

WHEREAS, efficient plumbing products, including ultra-low flush toilets (ULFTs), became widely available in the early 1990's, and have undergone substantial product development and performance improvement since that time; and

WHEREAS, the American Water Works Association Research Foundation (AWWARF) has commissioned the most comprehensive end-use study of indoor water use ever undertaken in North America, recording indoor water usage in twelve cities, the majority located in the Western States; and

WHEREAS, the AWWARF studies have documented per capita indoor water use reductions averaging over 30% in single-family homes equipped with water-efficient plumbing fixtures, fittings, and appliances currently on the market, compared to homes without such products; and

WHEREAS, the States comprising the Western States Water Council have identified drinking water and wastewater infrastructure needs totaling more the \$60 billion over the next 20 years, as contained in Needs Surveys forwarded to Congress by the Environmental Protection Agency; and

WHEREAS, many of these capital costs can be postponed or reduced by reductions in the volume of flows that must be accommodated; and

WHEREAS, in recognition of the public and private benefits of efficient plumbing products, between 1990 and 1992 the States of Arizona, California, Nevada, Oregon, Texas, Utah, and Washington adopted statewide standards for new plumbing products, including a standard of 1.6 gallons per flush for toilets; and

WHEREAS, following action by these States and others, the Energy Policy Act of 1992 was enacted in October 1992 containing uniform national water efficiency standards for plumbing products, including a standard of 1.6 gpf for toilets, with the active support of many water and wastewater utilities in the Western States; and

WHEREAS, other Western States have subsequently incorporated comparable water efficiency standards into their plumbing codes; and

WHEREAS, uniform national efficiency standards simplify and reduce the States' burden of enforcement regarding sale and installation of ULFTs and other water-efficient plumbing products; and

WHEREAS, uniform national efficiency standards maintain a national market for plumbing products, allowing manufacturers to achieve full economies of scale and encouraging wider competition in all jurisdictions; and

WHEREAS, legislation has been introduced in the 106th Congress to repeal uniform national efficiency standards for plumbing products; and

WHEREAS, enactment of such legislation will not benefit the communities and consumers of the Western States; and

WHEREAS, enactment of such legislation will increase the burden of enforcement on Western States and communities seeking to maintain efficiency standards for plumbing products, and will reduce the reliability and predictability of water savings resulting from such standards; and

WHEREAS, enactment of such legislation may disadvantage Western States seeking to maintain water efficiency standards for plumbing products due to the diversion of a disproportionate share of federal financial assistance for water and wastewater infrastructure in future years to States choosing to make less efficient use of water by relaxing or repealing water efficiency standards for plumbing products.

NOW THEREFORE BE IT RESOLVED, that the Western States Water Council supports the retention of uniform national water efficiency standards for plumbing products.

Mr. BARTON. Thank you. The Chair recognizes himself for 5 minutes for questions. I want to first try to get a handle on how much water is being saved by these new Federal standards.

Mr. Whalen, you seem to give the most fact based presentation. It sounds like the City and State of New York has put some real effort into trying to conserve water and has come up with a fairly innovative program. I am going to direct these questions to you because you used real facts in your presentation, but the whole panel is welcome to try to answer them.

My first question is: Of the total water that is consumed in the United States, what percentage is consumed by the appliances that are covered under these Federal standards, that is toilet, showerheads, et cetera? Does anybody know that?

Mr. WHALEN. Are you referring to the total amount that is withdrawn from the ground and rivers?

Mr. OSANN. Municipal water is actually a small fraction of the total if you include agricultural water use and electric power production. Those are a couple of big ones.

Mr. BARTON. We need to come up with a standard universe of water, and we need to determine what percent that the act covers is consuming. I am an engineer, and the first thing you have to do is identify the problem and in order to identify the problem you have to identify the parameters. That is all that I am trying to do.

Mr. OSANN. If I might, Mr. Chairman, the products that are regulated under the standards are responsible, I believe, for 70 to 80 percent of indoor water use.

Mr. BARTON. That is not answering my question. That is irrelevant. The question is how much water do we use each day in the United States and how much of the water we use is used by these appliances. Is that 10 percent of the total water or 5 percent or 1 percent? 80 percent? It is obvious if you talk about indoor water, you know, that toilets, showers, sinks, I guess bathtubs, washing machines, it is a fairly small universe.

Mr. WHALEN. I think it would be incumbent upon us to submit back to you the answers to those questions. I know that information is available, and I think between us and the organizations we represent, we owe it to you give you an answer factually.

Mr. BARTON. Here is why I asked that, Mr. Whalen. Your group with great justification is saying this is helping conserve water. The group that wants to repeal these standards says not all that much water is being saved by these standards. It is true that water is being saved but it is because of all of these other factors, it is

not because of this. The proponents of these standards are taking credit for something that they are not due credit.

Obviously if everything is equal and you have a 3.5 gallon toilet and a 1.6 gallon toilet and you use them the same number of times under the same conditions, that you are saving almost 2 gallons a use. But that kind of begs the question of the larger universe of total water that is being conserved.

So my first question is let's determine what the use universe is.

The second question is in the equipment inventory, what percent of the equipment in the inventory is this new equipment? Standards at the Federal level were passed in 1992 but they didn't go into effect until 1994, and again there is a—the testimony of the previous panel says that we are adding about 4.3 million toilets a year to the inventory and my guess is that is about 1 percent of the total toilets or even less, but I don't know that. Do you know the answer to that.

Mr. GOIKE. Mr. Chairman, the data that I have got and it is through 1996, which is the latest full year available, there are approximately 9 million shipments of toilets per year. Of those 9 million, approximately 7 million are 1.6 gallon toilets. So we are manufacturing and shipping approximately 7 million 1.6 gallon toilets per year.

Mr. BARTON. So the toilets that are above this standard, where are they going?

Mr. GOIKE. Those are commercial use.

Mr. BARTON. Which is not covered by the act.

Mr. WHALEN. In prisons, there are radical difference on toilets used there, for obvious reasons, and they do not meet that requirement. And there are other special uses. If you get involved in certain hospitals uses, there is a differentiation.

Mr. BARTON. The first panel said American manufacturers can manufacture the larger capacity equipment and export it. Is that true and is that being done?

Mr. GOIKE. There is a type of toilet called a blow out that uses a larger trap. That is an example of a larger volume toilet. Those can be used in public use places and where there is a lot of transient—stadiums.

Mr. BARTON. Is the American plumbing manufacturing industry manufacturing individual toilets that are the larger 3.5 or above and then selling them to Mexico and Canada and then they are coming back?

Mr. GOIKE. That is not my understanding, no.

Mr. BARTON. So those toilets are not coming back, being imported on an individual basis?

Mr. GOIKE. No, there is a big market of toilets manufactured in other countries.

Mr. BARTON. My last question, although my time has expired, what is wrong with Congressman Knollenberg's assertion that let's just repeal it at the Federal level because this is a State and local issue.

Again, Mr. Whalen, what you have done or your State and city has done is very commendable, but you didn't need a Federal statute to do that. What is wrong with just letting the State and local

governments, the western States, all of these entities that want to do this, let them do it but don't mandate it from Washington?

Mr. WHALEN. There is an answer and I will try to be brief. I have always found that if things are not mandated and then followed up and enforced, the tendency for things to go crazy happens, and that happens in manufacturing. I believe that that program in New York City couldn't have happened if all of the manufacturers weren't making the product.

I heard the gentleman to my left representing manufacturers tell you that the price of plumbing products was reduced considerably because instead of making 2 or 3 different types of models, now the manufacturer is making all one toilet and he is doing 9 million a year and therefore he can produce it at a cheaper rate. We found that to be true.

Mr. BARTON. He also said that the public could choose the lower flow toilet. And if that is the case, the people that wanted them, that small minority which I would include myself in, I would want a larger capacity toilet, that would at least be available. My time has expired.

Mr. GOIKE. Could I add, to help answer that question, from a manufacturer standpoint, the problem we face with this type of repeal is that it would add considerable cost to manufacturing. If you can imagine a production line with showerheads or faucets and we have to start to manufacture product for all the different State laws that would now be in effect once the Federal law is repealed and the municipalities, the cost of manufacturing, distributing and logistically getting all of those products to all of these individual States and municipalities would drive up the cost.

Mr. BARTON. The reality is that there would not be that many different variations. We would have a national code. There would be some variation, I would admit that, but it wouldn't be tremendous.

Mr. BURR. I don't think that there is anything in the legislation which mandates that a manufacturer supply all of those different products.

Mr. GOIKE. But that would take away our competitive advantage.

Mr. BURR. It would be the response of the customers that would require you to make that—

Mr. GOIKE. We would be responding to the customers but we would be responding to customers with 50 different proposals.

Mr. BARTON. What Mr. Burr is saying is that you wouldn't have to. You could let Barton-Burr Enterprises spring into existence to manufacture and sell the two toilets per year that weren't 1.5 gallon flow.

Mr. BURR. Additionally, I think that is the reason we are having this hearing. We are responding to the people that we represent who are not satisfied with the standardization of the product that is available. Just like you would respond.

Mr. BARTON. The gentleman from Florida is recognized for 5 minutes.

Mr. BILIRAKIS. Your question speaks to what we are doing here. I know that certainly Mr. Burr would recognize the economies of scale that one of you mentioned would not be present if a manufac-

turer had to be concerned with a number of different size, different standard type products.

And so yes, the market—some members of the market, maybe a limited, maybe a larger amount, would maybe demand the larger size, but you wouldn't really know how many of those people there would be, so you would have to manufacture some sort of a percentage which of course would drive up the cost.

Well, let me ask Mr. Tippin, have the water utilities that promoted efficient toilets and showerheads received a substantial number of complaints from their customers?

Mr. TIPPIN. I can speak for Tampa.

Mr. BILIRAKIS. Mr. Whalen has a thick booklet which speaks to that. Maybe you can speak to Tampa.

Mr. TIPPIN. I had a conversation yesterday morning with our chief plumbing inspector, I asked him, what about the satisfaction. Has he had complaints. He says not in the last 2 years. So with the changes in the design of the toilet fixtures——

Mr. BILIRAKIS. Are you saying during the first couple years or so there were some problems?

Mr. TIPPIN. Yes, I think there were design problems and I think those have since been corrected.

Mr. BILIRAKIS. I will allow you all to respond, too, but Rebecca Hyder, who is a member of my staff and does this issue, handed me a note. "my parents built a new house in 1995," this is in Florida, "with low flow toilets and they have had no problems or complaints." would you say that——

Mr. TIPPIN. I can echo that. My son just built a new house in north Tampa and moved in last summer with three low flow toilets in Hillsborough County, no problems.

Mr. BILIRAKIS. Mr. Rush, we heard him say that he was remodeling a 100-year-old home and he had to put in the new low flow toilets. He said he is unhappy. Is that attributable to the fact that it is a 100-year-old home and you have that type of piping and that sort of thing? Comments?

Mr. TIPPIN. In my opinion you are putting a new toilet in a 100-year-old plumbing design which may be all wrong for that fixture.

Mr. WHALEN. A lot of the toilets that get used are specified for the kinds of use. The one-family home would necessarily have a different toilet.

But just to comment, the reason that there was only, let's say, 20 different kinds of toilets used in the program that we did, we found that those 20 toilets worked and the plumbing guy said I am not putting anything else in because I won't get paid for it. That was the marketability of it.

Mr. WILLARDSON. I know that our chairman Francis Schwinn from North Dakota sits on the State Plumbing Board, Department of Natural Resources, and he has noted that their inspectors have had no complaints, that initially there were problems but improvements have been made, and he views this bill as a step backwards.

From a State perspective, it is an issue of enforcement. The Federal standard is enforced on manufacturers. The State can't enforce that at the State level on manufacturers so they would have to look at the retail level or individuals. And if you talk about getting into

people's bathrooms, they are not going to want the State regulators in their bathrooms looking at what they are using.

Mr. BILIRAKIS. Thank you for that. Mr. Taylor, and I don't know, is Mr. Taylor still here? Mr. Taylor, the Director of Natural Resource Studies, Cato Institute, very eloquently, basically without trying to put words in his mouth, indicated that going back to the 1970's that water started to be conserved. And consequently, that these standards really haven't had very much to do with that. In fact, the lines in terms of conservation started back at that period of time and has just really continued on. Did you hear the same thing that I did in that regard? Comments? Mr. Whalen.

Mr. WHALEN. Well, I can only tell you, sir, I worked in New York City for almost 40 years and there was an ongoing problem with the increased consumption per person living and in business in that town that we could not get enough water to take care of the requirements, and it went up every year. And I used to sit on the conservation committee and we used to say we keep building reservoirs and it is not enough. They did not have an increase in people in New York City in many years. That town has stayed static. It has not changed in 20 years. What it was was consumption. I have sat on national and State boards and consumption has increased, not decreased, and it would generally decrease in the areas of residential and commercial use.

Mr. BILIRAKIS. So you are attributing the savings to—

Mr. WHALEN. I know that we saved 29 percent in New York City on that program that we put in, and you should realize that the largest cost in New York City for water and sewer is the water treatment, not for the water.

Mr. BILIRAKIS. You wanted to say something, Mr. Tippin?

Mr. TIPPIN. Yes, from 1974 to 1989 water consumption in Tampa rose very sharply until we had supply problems. And water consumption since 1989, the demand has been essentially flat due to all conservation efforts, indoor/outdoor.

Mr. WILLARDSON. If I might add—

Mr. BARTON. You are operating under the same 5 minute rule I operated under.

Mr. BILIRAKIS. Thank you. Mr. Willardson.

Mr. WILLARDSON. I am not sure that it is useful to look at it from a macro perspective because there have been reductions in irrigated agriculture, and as has been noted, that is 80 percent of the water use in the country. We are talking about a 5 to 10 percent for treated water supplies. It is the cost of not providing the raw water but treating that water and then disposing of the waste water that is an issue, and that is really what these national standards get to.

Mr. BILIRAKIS. Mr. Chairman, my time is up and I am not going to go into it, but you started questioning regarding Federal preemption and why is it so important to manufacturers and others in lieu of the fact that New York City was doing it even prior to and many of the States were, 17 States I believe had it in effect. I think it is a very foundational question, as I said, when you first called upon me.

I don't know where these people—and I also wanted to say, too, I really appreciate Mr. Burr returning because we had people on

this side of the aisle who are supporters of the legislation heard strictly that one story and left after that one panel and did not hear anything from this particular panel. I just wanted to express my appreciation to Mr. Burr.

Mr. BARTON. The reason that we started at 2 was so that the gentleman from Florida could be here. Initially we were going to do this at 10 this morning. Mr. Bilirakis had a pending subcommittee that he was chairing.

Mr. BILIRAKIS. No, I had the markup.

Mr. BARTON. So we rescheduled, and that is why we are still here at 5:30 in the evening.

Mr. WHALEN. You have a test station. This building that you are in was recently converted. And I would ask those who are in this building, do you have a lot of plumbing problems in this building?

Mr. BURR. They are all vacuum flush. Totally. I haven't visited every toilet in this building, but every one that I have seen is.

Mr. BARTON. He is working his way through them.

Mr. WHALEN. I got involved in the Department of Energy's M&V protocol on this and subsequently the Federal contracting on it and the results in the Federal buildings and Army bases and Naval bases around this country have been unbelievable in energy savings. That is the air conditioning and the refrigeration, the whole thing. When you read the figures of these bases and these office buildings and court buildings that belong to the government, and so much of this work has been done, the executive order was just renewed I understand in March and most of the facilities now have been done and the savings is unbelievable.

Mr. BARTON. The public bathrooms on the men's side, obviously I have not been into the women's, but in the men's there is some sort of a central, there is not an actual physical bowl or receptacle in the public. It is some kind of a central powered situation. But in my personal bathroom in my member's private office, I have had—at least it looks like a low flow. It is shorter.

Mr. WHALEN. My understanding is that this whole building was done.

Mr. BARTON. It does have problems, so I don't use it except in extreme emergencies.

Mr. BURR. Would the chairman like me to take over now.

Mr. BARTON. Yes, I recognize Mr. Burr for 5 minutes.

Mr. BURR. Mr. Tippin, you have 2 or 3 that work. I have two and neither one of them work, and I hope for Mr. Goike's sake that he doesn't take that as a comment unsubstantiated. I hope you will give me the credit to be able to judge whether the toilet works or not. One is fairly recent. It is in North Carolina. The other one is slightly older and it is in Michigan, and so I know it doesn't have anything to do with the difference in States. Let me go back.

You question this need as a manufacturer to have multi SKUs. I mean, would you lobby us to have a Federal standard on door knobs, because I know Masco is in the business of door knobs, but you wouldn't do that, would you? You would like to be able to offer something to everybody because there is a different thing out there that triggers that buying impulse in everybody and I think at the root of what Mr. Knollenberg has tried to do, he hasn't said—you know, reverse the Federal position on a 1.6 gallon low flush toilet

being a good thing, a conservation issue. He just said maybe the Federal Government should not mandate it. Maybe it should not be that we have decided what the flow is for every toilet in America because clearly as Mr. Haeger said, there are a number of folks that call his show, a high percentage, who are upset, who don't like the product and who, given the choice, would choose something else.

I am not sure how many of those are going over to Windsor, Canada or Mexico. Do you have any manufacturing of toilets out of the United States or is it all in the United States?

Mr. GOIKE. No, it is all in the United States.

Mr. BURR. But I am sure there is some manufacturing out of the country and it does come back in the form of product that U.S. Companies have manufactured that comes back in under the radar screen of this Federal mandate that is out there.

Mr. Whalen, you said the rebate for the first toilet in a house was \$240?

Mr. WHALEN. Yes.

Mr. BURR. How did you come up with that?

Mr. WHALEN. I sat with the city people and we worked over the prices of the manufacturers and the price of doing the work in a particular locale.

Mr. BURR. You also said that the plumbers couldn't be paid for their work unless the toilets worked successfully. Are there any plumbers still due money?

Mr. WHALEN. No. You couldn't continue to be in the program if you were providing poor service.

Mr. BURR. So every toilet that New York chose to put in the program never had a problem?

Mr. WHALEN. No, sir, I won't say we never had a problem but those few that had problems, that contractor went back and satisfied them.

Mr. BURR. That sounds like an installation problem versus a manufacturing problem. And I think what we are here concentrating, and clearly we got off on plumbing, we are talking about the design of the toilet. Can 1.6 gallons of water in the current configuration drive the normal waste in a bowl through on a first flush?

I think my frustration is I found the answer to be no. I have found it as well in hotels, and it is a pretty embarrassing thing to call for a plunger and have a guy come in and plunge your toilet in a hotel. My question is: Did all of the toilets successfully work that 1.6 gallons of water flushed it?

Mr. WHALEN. No. In fact, it very quickly became apparent that the X model or the Y model was not working and therefore those contractors no longer used that model.

Mr. BARTON. Would the gentleman yield.

Mr. BURR. I would be happy to yield.

Mr. BARTON. Why did we agree on a 1.6 standard? How did that develop? Mr. Knollenberg alluded to that that equals 6 liters. That would lead me to believe there is some equivalent 6 liter standard in Europe.

Mr. WHALEN. Europe has used the lesser size water closet for a long time, and I believe they got involved in this discussion back in—

Mr. BARTON. Was there a physical pilot program and it was determined that 1.6 gallons was the minimum necessary to do the job? Did it just kind of evolve because of the European situation? Where did that particular number come from because it is not—it is not 1 gallon, it is not 2 gallons. It is just an odd number.

Mr. GOIKE. That number was arrived at—prior to 1992 there were approximately 17 States, as I mentioned in my testimony, that already moved to that direction before the 1992 EPAct.

Mr. BARTON. But somebody at some point in time designed a toilet with that.

Mr. GOIKE. The State of Massachusetts was the first one given credit to set the limit at 1.6 gallons per minute. There were other quantities.

Mr. BARTON. But if we had physical data that showed if we went to 2 gallons, nobody would complain, would the industry—it is still less than 3.5. I am just trying to determine from a so-called scientific standpoint if there is a reason for 1.6 gallons. It is smaller than 3.5, but it is not an instinctively obvious number. Did somebody at some point in time say we need to design a toilet to save water and then do all of these empirical tests and say 1.6 gallons works. Or did somebody in Europe just start making them or did it just happen?

Mr. GOIKE. I have never heard of the European influence before. My knowledge on this was that it was set by 17 States prior to 1992. And then it was enacted into EPAct and that was the measure—

Mr. BARTON. Mr. Burr, I took some of your time.

Mr. BURR. Mr. Whalen, in New York did you replace showerheads at the same time?

Mr. WHALEN. Yes. The 240 included the showerheads and those faucets that could handle the aerator and the showerhead and the toilet.

Mr. BURR. Should we outlaw bathtubs?

Mr. WHALEN. I frankly think that the use of bathtubs—I mean, there are a lot of positive things. I can remember washing our children in the tub rather than having the six of them in the shower because we would have had a riot. Or the other thing, you get older folks that can't take a shower. There are a lot of uses for bathtubs.

Mr. BURR. My kids are 13 and 14, and it is a little tough to get them in the same tub. Just for 1 minute believe some of the people who were here earlier that everybody in America that has got a new 1.6 gallon toilet has to flush it three times to alleviate the waste that is in it.

Mr. OSANN. That is hard to believe.

Mr. BURR. If that were the case, wouldn't we have failed with the conservation side of our quest?

Mr. OSANN. Objectively probably not, but with regard to public acceptance, certainly. Because the average—

Mr. BURR. My math says we would have used more water.

Mr. OSANN. The number of times that a toilet is flushed at least in a residential setting is 5 a day per capita. Solid waste evacuation is an average about one a day.

Mr. BARTON. That does follow common sense.

Mr. BURR. Let me make this statement. Given the questions that are out there about the need for multiple flushes, the performance of the product and your belief that this standard should stay in effect, I really believe that it is incumbent upon all of us to find out are we saving. I think that is the obligation that we have to the American people. If there is something great being accomplished by this, then let's keep it. If there is not something great that is being accomplished, and we are putting an undue burden on the American people, on manufacturers. I know that you have switched, but you have got the old molds, you can switch back, don't we owe it to them to at least allow them the choice of buying what their preference is? It is only a question that I raise.

Mr. WHALEN. I was going to ask the question of Mr. Burr, do you have knowledge of who installed those water closets? Was it a handyman or plumber?

Mr. BURR. Moi.

Mr. WHALEN. And you specified as to what you wanted? You were replacing—

Mr. BARTON. We have never had a panelist ask a Congressman questions.

Mr. WHALEN. I am sorry.

Mr. BURR. I actually went to the store and chose my toilet.

Mr. WHALEN. I appreciate his candor.

Mr. BURR. To be quite candid with you, if a week later or a month later or today I were to see somebody throw away an old toilet, I would grab it and replace that one in that new room in a second.

Mr. BARTON. Is the gentleman available for service calls to other members of the subcommittee?

Mr. BURR. The gentleman would do everything in your apartment but clean it given the shape that it is in.

Mr. BILIRAKIS. The gentleman asked a question and I know his time has expired, but he considers it key to determine whether or not there is such a savings as a result of the low flush. So I don't know—you asked that question, Richard.

Mr. BURR. I thought he answered.

Mr. OSANN. Mr. Chairman, if I might respond to the question raised by Mr. Burr. I think that several of us have actually alluded to it in our testimony, the question of are we really saving, do they really save.

Mr. BARTON. That is one of my double foundation questions.

Mr. OSANN. The American Water Works Association's research foundation, which is the arm of the drinking water utility industry, has just completed but not yet published the most comprehensive survey of residential water use that has ever been undertaken in North America. It involved 12 cities, one was Tampa. It involved monitoring individual water use events at over 100 homes in 12 cities over 4 weeks. And in the previous panel there was a question about how can you really tell how much waste water an individual appliance is using.

In this case there were data loggers that were installed at each location and software that would match—that would identify the signature, actually, of each water using product at that residence and match it up when it occurred over a 4-week period. So each

time toilet A was flushed, there was a data point in their survey. Each time a shower was used, there was a data point in the survey.

This is the most comprehensive water use—residential water use survey ever undertaken. It will be publicly released in September.

There are a lot of interesting things that come out of this survey, but two of the things that I think are most relevant to the subject of this hearing involve the use of water by 1.6 gallon toilets. And the survey found that those residences that—there were a certain number of residences that were exclusively equipped with low consumption toilets, there were a number of residences that were mixed and a number of residences that did not have any 1.6 gallon toilets in them.

When you compared those that had the 1.6 gallon units and relied on them, the ones that didn't, the amount of water that was used for flushing toilets was reduced by about 50 percent on a per capita basis. And that is real life conditions. Real homes, real people using the products as they would use them in their homes over a 4-week period. The other thing was that the number of flushes per capita, and this can be measured because this extensive data set is available, the number of data sets per capita between the residences, the residences that had the 1.6 gallon and relied on them exclusively and those that didn't have them, were statistically indistinguishable.

There was about 4.9 something for the—for one group and 5.0 something for the other group. So to the extent that there is a double flushing issue out there, it has not been identified in the data that has been produced in the most comprehensive residential—

Mr. BURR. But what about my house? That data is not—

Mr. BARTON. Let's give the group credit. They have tried to do a survey that attempts to reflect that.

Mr. OSANN. The plumbing industry was not involved in this survey. It was entirely funded by the drinking water industry.

Mr. BILIRAKIS. I wonder if the results could be made available to the committee.

Mr. BARTON. When it becomes public.

Mr. BILIRAKIS. In September he indicated.

Mr. BARTON. In the interest of full disclosure I need to admit that I have a high flow toilet and it has stopped up, and I have had to work like a tiger to unstop it. It is not only the low flow operators that don't work, sometimes the old flow don't work, either, especially if you have children and wives who put Pampers in the toilet bowl. They tend not to go through the system, regardless of how much flow you put into the system.

Mr. OSANN. I think that is exactly the point, Mr. Chairman. I think some people have encouraged people to think that every plumbing problem that is experienced now is the result of these new and tighter standards, and I am afraid there were plumbing problems before the 1.6 gallon toilets.

Mr. BARTON. We will stipulate that there were, from personal experience.

Mr. WILLARDSON. Can I add to those comments.

Mr. BARTON. Let's let Mr. Hall have his time. I do want a formal answer where this 1.6 gallon standard came from. Hopefully there

is some research which showed that is necessary as opposed to just serendipity.

Mr. Hall is recognized.

Mr. HALL. Thank you, Mr. Chairman. I just have a unanimous request. At the request of Patrick O'Conner of the Washington Government Affairs Office of American Supply Association, I want to enter into the record the statement of Harold Williams, Jr., who is for the American Supply Association. It is a national trade association for wholesale distributors of plumbing fixtures, and it has one cover page and 5 pages of Mr. Williams' statement.

Mr. BARTON. I am glad that the gentleman had made that because the Chair had already agreed to do that, but I am very willing to accede to the request of the minority member. This group does represent the wholesale distributors. They were not able to testify in person, and we do want their testimony in the record at the appropriate point in the hearing. Without objection, so ordered.

Mr. HALL. Thank you. I don't know what questions have been asked, so I yield back the balance of my time.

Mr. BARTON. Does Mr. Bilirakis have additional questions?

Mr. BILIRAKIS. I know that this panel will be available to submit answers to any written questions we may offer, and also that September report, when it does come out, if you can give it to us quickly I think it would be very significant for us to have it.

Mr. BARTON. I want to thank you gentlemen for waiting. It is always the case that if these hearings go late afternoon there is not as much member participation as there are at the earlier parts of the hearing, but we did want a balanced hearing, and I am a co-sponsor of Mr. Knollenberg's legislation and so I would like to see if there is not a consensus to move his bill or a bill similar to it. But I certainly understand the reluctance of the manufacturers and I am very supportive of what is being done at the State and local level that Mr. Whalen alluded to and Mr. Tippin from Tampa alluded to. It is obvious that we do need to conserve as much water as possible and this is certainly one approach to it.

Without any more members here to ask questions, we do adjourn this hearing.

[Whereupon, at 5:55 p.m., the subcommittee was adjourned.]

[Additional material submitted for the record follows:]

PREPARED STATEMENT OF THE AMERICAN SOCIETY OF PLUMBING ENGINEERS

Who is ASPE?

The American Society of Plumbing Engineers (ASPE) is THE international organization for professionals skilled in the design, specification and inspection of plumbing systems. ASPE was founded in 1964 as a non-profit organization and currently has over 7,000 members. Internationally, ASPE members are located throughout the United States, Canada, Asia, Mexico, South and Central America, the South Pacific, Australia, and Europe.

ASPE is dedicated to the advancement of the science of plumbing engineering, to the professional growth and advancement of its members and to the protection of the health, welfare and safety of the public. The Society disseminates technical data and information, sponsors activities that facilitate interaction with fellow professionals, and, through research and education, expands the base of knowledge of the plumbing engineering industry. ASPE members are leaders in innovative plumbing design, effective materials and energy use, and the application of advanced techniques throughout the world.

In addition, the ASPE Research Foundation, a separate non-profit organization founded by ASPE in 1976, is the only independent and impartial organization involved in plumbing engineering and design research.

Plumbing History

Whether it was the ancient Romans or Grecians who created the first rudimentary plumbing systems, water supply and human waste disposal have posed plumbing related problems which civilizations have had to deal with for centuries. With population growth came and water borne disease such as typhoid and cholera. Water could no longer be carried in jugs and human wastes could no longer be dumped into street gullies or into streams. Embryonic plumbing systems were simply pipes designed to carry water to, and waste away from, population centers. However, indoor plumbing and drainage systems in the industrial centers of the world have only been viable for less than a century. There are still many highly populated, underdeveloped areas in the world which continue to suffer the dilemma, challenges, hardships and indignities associated with primitive plumbing and drainage systems.

What is Plumbing Engineering?

Plumbing Engineering is the application of scientific principles to the design of efficient and ecological systems for the transport and distribution of fluids, solids, and gases. Plumbing Engineers are protectors of the public's health, since they design drainage, distribution, and other piping systems to transport potable water and to safely dispose of human and industrial wastes. Engineered plumbing systems serve residential dwellings and commercial, institutional, industrial and public use facilities such as, hospitals, laboratories, factories, schools, shopping centers, stadiums and the like.

Plumbing Engineers are responsible for the design of more than 30 separate and distinct systems that are necessary for institutional, industrial, educational, commercial, and residential buildings. Some of these systems include potable water, domestic hot water, recycled water, sanitary and industrial waste, storm drainage, laboratory water and waste, medical gases, compressed air, vacuum systems, venting systems, fire protection, swimming pools, decorative fountains, irrigation, water treatment, and sewage disposal.

Plumbing Engineers design the various plumbing systems of a construction project, select suitable materials and equipment, write specifications, prepare cost estimates, aid in contractor selection, and provide additional field services to the owner/client during and after construction. A Plumbing Engineer typically has a degree in Civil, Sanitary, or Mechanical Engineering—or a two-year technical degree in these areas. A majority of Plumbing Engineers carry the designation of Professional Engineer and/or Certified In Plumbing Engineering.

Why Is ASPE Here?

The members of the American Society of Plumbing Engineers are interested in, and protectors of, the public's health, welfare and safety. The Society supports insightful and judicious use of the world's natural resources. Properly researched and designed programs of water conservation and reuse, and the curtailment of wastewater, not only results in the conservation of water but also reductions in energy use, pipe sizes, wastewater treatment costs, and facility construction and operating costs. Proposed bill H.R. 623 (Plumbing Standards Improvement Act of 1999) compounds the impreciseness and deficiency of knowledge available when the Energy Policy Act of 1992 (EPACT) was initially passed.

To act on H.R. 623, and pass it out of committee, without any solid data, without any specific research, without any detailed information, and relying mostly on anecdotal tales and complaints, would be a travesty and disservice to not only the environment, but to the health, welfare and safety of the public. Legislation of this magnitude requires adequate and complete data, in-depth research and the testimony of experts, not politicians. Testimony should be solicited from not only interested parties, but also vital constituencies and individuals with the appropriate knowledge and expertise.

When EPACT was first passed, it was done so without the expert knowledge and input of the plumbing engineering community—and ASPE must take partial responsibility for this oversight. However, today, ASPE steps forward, and will no longer be silent on EPACT—vital legislation that has provided water conservation measures desperately needed to maintain a safe and continuing source of potable water for this generation and generations to come. To have come this far, only to now have proposed legislation designed to create havoc and begin the process of tearing apart the very fabric of water conservation and water usage is a debacle of unprecedented magnitude. A vital turning point in leading the world towards water and energy conservation was EPACT; a pivotal point in undoing that leadership is H.R. 623.

Water Conservation Is Being Achieved

When legislation affecting engineering plumbing and drainage systems are altered, the effects of even a small change to a single portion of a system can be dramatic and create unintended, drastic and catastrophic results. EPACT was such a change. Since its inception, the plumbing industry has struggled to properly implement the water and energy conservation effects of the legislation on plumbing systems. In the six years since the industry has undertaken this massive effort, it is only now that the environmental and engineering efforts are taking effect and being observed and changes are being hypothesized.

Intuitively it is obvious that changing from an average water closet 3.5 gal flush to 1.6 gal will save considerable amounts of water. However, to meet that requirement, the plumbing manufacturers have had to re-engineer and redesign their products. Simple? Consider that for new installations, the plumbing engineer can design the overall systems to properly function to integrate the new water conserving fixtures. However, for retrofit installation environments, the results of using water saving fixtures on systems not designed for them results in unexpected and typically, unintended results.

For example, the anecdotal evidence is relatively strong—low-flow water closets do not consistently work well in retrofit environments (and sometimes not in new installations). The amount of human waste has not diminished because of the implementation of water conservation plumbing fixtures; only the amount of water available to remove the wastes out of the water closet bowl and move it through the drain line. Therefore, there are water closets that require multiple flushes for the removal of human bulk wastes and the related necessity of cleaning and sanitation, and in some cases increase clogging within the bowl or in the drain line. However, this does not diminish the overall water and energy conservation effects of EPACT.

Some simple math will help demonstrate. If at any one time:

1. there are 200 million people in the United States on any given day;
2. approximately 45% of them are located in major urban areas
3. each individual uses a water closet an average of four times a day for which 50% of that usage includes ridding the body of its bulk wastes (in actuality bulk waste removal occurs about one-third of the time);
4. each water closet requires an average of 2 flushes to remove bulk wastes and 1 flush to remove liquid wastes; and
5. it is assumed that a 3.5 gal per flush water closet will require an average of only 1 flush to remove bulk wastes (which is not a correct assumption);

then, on average, the amount of water that can be saved if everyone was using low-flow water closets, is approximately 400 million gallons of water per day. (This, of course, is for water closets only and does not include any non-urban areas.) Of course, not everyone is currently using low-flow water closets, but the future intent is there. Moreover, the passing of H.R. 623 doesn't just affect water closets. Shower heads, sink faucets, urinals and other plumbing fixtures will all be affected.

Yes, in today's fast paced environment, double and triple flushing or a water closet is an annoying nuisance—but it saves water and energy (reduced wastewater treatment costs, reduced pumping costs, etc.). The entire plumbing industry continues to evaluate and adjust, successfully, to the requirements of EPACT.

The plumbing industry was slow to react, and because of a lack of data and research, did not fully understand the effects of reduced water usage and flow in plumbing systems. Dr. Roy Hunter, 75 years ago, researched plumbing systems and developed what is now dubbed "Hunter's Curve." Hunter's curve furnishes data on the probability of use on a plumbing system and provides guidelines on the sizing of piping of the water and drainage requirements for a plumbing system. However, it is important to note that water conservation measures do not affect the probability of use of the plumbing system. Therefore, the data and information on how to better accommodate low consumption fixtures has been slowly developed by a disparate conglomeration of studies by manufacturers, engineers and model code and standard organizations. The collected materials have been used to slowly modify local government jurisdictional plumbing codes to provide for smaller pipe sizes, installation modifications and materials which better accommodates the use of low consumption fixtures and maintain the integrity and efficiency of a plumbing system.

H.R. 623 will do nothing more than exacerbate an already complex engineering issue that the plumbing industry is still coming to grips with and understanding, and defeat the ongoing and successful water conservation efforts that have been achieved.

A Basis for Pandemonium

The repeal of the plumbing standards portions of EPACT by H.R. 623 actions has implications that will sorely test the patience of the public and may well result in significant increased costs for plumbing products. Without the provisions of EPACT, there will no longer be a national water conservation standard. Any governmental regulatory body would be able to mandate water usage parameters of plumbing fixtures. The result could well be disastrous.

A common water usage standard for plumbing fixtures allows a plumbing system to be engineered and designed to function as intended. Without a common standard, a plumbing system could be compromised and result in a haphazard operation. Fixtures would have to be yet again redesigned, a process undertaken after EPACT implementation that has already resulted in manufactures having to spend millions of dollars.

Plumbing systems would require immense amounts of new data collection and evaluation to ensure proper re-engineering and design. Most onerous of all would be if each local governmental jurisdiction were required to develop and pass new plumbing codes sufficient to provide for the various multitude of options that would be sure to result. States may be forced to enact specific water conservation legislation. Without a coherent national strategy in place the result could well be calamitous as each state attempts to satisfy its own need to conserve available resources. Will manufacturers be expected to retool factories and produce plumbing fixtures to meet separate local government requirements? Must plumbing engineers create separate design standards for each state?

H.R. 623—A Formula for Unrequited Chaos?

H.R. 623 has the potential to set the entire plumbing industry back at least a decade. The provisions of EPACT are being implemented and the initial difficulties and problems associated with water and energy conservation are being corrected as they are identified.

There exists no researched evidence that indicates that passing of H.R. 623 would accomplish any purpose. Rather, with the potential for confusion, the health and safety of the public may well be comprised. The entire plumbing industry—manufacturers, contractors and engineers—are creating and building the necessary information and knowledge to effectively and efficiently utilize low-consumption fixtures, albeit slowly, given the dearth of available research funds. The common goal is the support and success of water and energy conservation. The intent of the plumbing industry is to continue its mandate to protect the health welfare and safety of the public.

Likewise, the federal government has a duty and an obligation to protect the public's health, welfare and safety, to maintain the environment, maximize the efficient use of all available resources and facilitate interstate commerce. This cannot be accomplished by repealing the water conservation measures contained in EPACT.

The federal government has an obligation to help obtain, along with affiliated professionals, such as plumbing engineers, contractors, manufacturers and code officials, the necessary expertise, information and knowledge required for effective and efficient decisions. Any fixture, mandated in isolation to operational and research data and its effect and functionality on existing plumbing and drainage systems, may be not only be considered ineffectual government, but a compromise of its duty. Decisions such as contemplated by H.R. 623 cannot be made in a vacuum of knowledge.

ASPE Recommendations

1. ASPE does not believe the repeal of any portion of EPACT is warranted at this time. However, we suggest maintaining, subject to the recommendations below, the current standards as set in EPACT. An incomplete oversight program for appropriate performance standards for plumbing fixtures would open the way for individual state mandated performance standards and result in confusion for the consumer and the manufacturer.
2. Create an environment, and provide for the support of plumbing engineering and research, for data collection and research conducted within the environs of an independent accredited laboratory under the aegis of plumbing engineers and related unbiased professionals. ASPE recommends that a federal appropriation be made to provide for the testing and collecting of plumbing engineering and design data and instituting of related necessary research.
3. Have standards established through the currently available processes such as ASME/ANSI. However, include the requirement that all future standards, and all changes, modifications or adjustments of current standards that affect or impact federal legislation and/or the public's health, welfare and safety, utilize ac-

- tual data and research, and not be limited to “professional, or non-professional, opinions.”
4. Rather than repeal of the DOE’s jurisdiction, have regulations be more complete and include the performance standards necessary to ensure the proper operation of plumbing fixtures. That is, the current regulation only requires that fixtures meet a flow and capacity standard, the 1.6 gallon requirement. The current ASME, A112.19.6 already includes sufficient other performance standards, some of which should be incorporated as part of the regulation.

Please, Do Not Pass H.R. 623

As plumbing engineers and related professionals which make up the membership of ASPE, we take great pride in our chosen profession. We also take our responsibility to protect the public health and the environment quite seriously. Therefore, we implore you to not pass H.R. 623.

PREPARED STATEMENT OF HAROLD WILLIAMS, JR. ON BEHALF OF THE AMERICAN
SUPPLY ASSOCIATION

I am Harold Williams from Selkirk, New York. Selkirk is a suburb of Albany. My company, Security Supply, is a wholesaler of plumbing fixtures and related products with 11 branches, three of those within 20 miles of the Canadian border.

I am pleased to submit this statement on behalf of the American Supply Association for the July 27, 1999 hearing on H.R. 623, legislation to repeal the uniform national water conservation standard for plumbing products.

The American Supply Association (ASA) is the national trade organization for wholesale distributors in the plumbing, heating, and cooling industry. The Association has over 800 member companies, with more than 3,000 locations. We represent more than 80% of the sales volume in the industry.

Wholesalers sell toilets and other plumbing fixtures to installation contractors, bath retailers, homebuilders and property managers. As a part of the distribution channel that moves products from the manufacturer to the consumer, a very large percentage of toilets sold today is handled through a plumbing wholesaler.

H.R. 623

Frankly, ASA members do not understand the purpose of this legislation.

Repeal of the uniform national efficiency standards for new plumbing products is particularly troubling in light of the drought conditions that continue to affect sections of the country, including the Washington, D.C. area.

Since 1992, plumbing manufacturers have redesigned all of their toilets to the 1.6 gallons per flush (gpf) requirement. The thought of scrapping all of their efforts and going back to the 3.5 gpf standard is not in anyone’s best interest.

H.R. 623 will cost our wholesalers millions of dollars with no corresponding benefit. However, these losses will pale in comparison to the billions in additional costs faced by municipal water and sewer districts, which have based their strategic plans for the future on the 1.6 gpf standard.

Passage of H.R. 623 will turn back the clock on water conservation and return us to a world where any state or locality can set its own plumbing products standards. With the potential for up to fifty different state standards, plus hundreds of varying local standards, there would be chaos within the entire plumbing industry.

A WHOLESALER’S PERSPECTIVE ON H.R. 623

Why A Uniform National Standard is Appropriate

Generally, plumbing wholesalers are not big fans of federal regulations. Compliance with most regulations is costly and burdensome.

However, the 1.6 standard makes sense. Wholesalers are united in support of the current standard. It allows products to move freely across state lines without the industry being required to manufacture, stock and deliver products based on varied state or local standards.

Prior to the 1992 Energy Policy Act, wholesalers had to deal with 17 different state regulations and a myriad of local standards. There was chaos in the marketplace. The wholesaler who sold product in more than one state had to carry duplicate and sometime triplicate inventories to meet differing state and local standards.

Even for the wholesaler doing business in a single state there was confusion. For example, in Massachusetts, the plumbing code mandated the *installation* of 1.6 toilets. Who was affected by that law? The licensed contractor—our customer. But

since the sale of 1.6 toilets was not mandated, the Sunday newspapers would carry ads for home centers offering 3.5 toilets for sale.

Mr. Chairman and Members of the Subcommittee, I strongly urge you not to turn back the clock on water conservation and return us to a world where any state or locality can set its own plumbing products standard. H.R. 623 equals chaos.

Are There Consumer Complaints

There have been a lot of claims and assertions that there is a huge consumer uproar over the 1.6 toilets. There is no question that some of the early models did not work as expected. But that is typical whenever a new product is introduced. However, the product being sold and installed today is working and saving water.

Are there still consumer complaints? There always will be an unhappy consumer, but there is no public uproar.

In an article from Consumer Reports magazine, May 1998, regarding low flush toilets, their testing showed that newer designed units work just fine.

They tested units from nearly every major manufacturer and found many affordable units that, when installed, would save the average family from up to 500 gallons of water per week.

I am in the business of selling plumbing products. If consumers are unhappy, my business does not profit. Even a young boy or girl selling lemonade on the street corner knows that a successful business depends on a satisfied customer.

More than 30 million low flow toilets have been sold since 1992. And a plumbing wholesaler has sold almost every one of the 30 million. If these products really did not work and there was really a public uproar, plumbing wholesalers would be the first to hear about it. Make no doubt about it—when my customers are unhappy they make sure that I know. If my customers—installation contractors, builders, and property managers—were hearing complaints from their unhappy customers the first call would be to Security Supply.

I would not be here today if my customers and their customers were unhappy. Further, I would not be in business today if I sold products that did not perform properly.

Is There A Black Market?

I keep hearing about a “black market” in toilets. Frankly, the only black market I am aware of is the “garage sale black market” where you might be able to buy an old toilet at a neighborhood sale.

But is there a black market in new toilets?

No!!

Again, I am in a business that sells plumbing products. My company, Security Supply, is located in upstate New York, with three branches about 20 miles from the Canadian border.

If truckloads of “black market” toilets were being shipped across the Canadian border for sale in New York, I would know. If there were a black market, Security Supply and other plumbing wholesalers would see a drop in sales and we haven’t.

Rest assured, if plumbing wholesalers were losing market share to a “black market,” I would support H.R. 623. But, frankly, there are probably more Cuban cigars coming across the Canadian border into the U.S. than contraband toilets.

Cost of H.R. 623 to Plumbing Wholesalers

I would like to make one comment on the cost to plumbing wholesalers if the national standard for plumbing products were to be repealed. What happens to the value of the hundreds of thousands of low flow toilets that plumbing wholesalers have in inventory throughout the country? After the supporters of H.R. 623 go on the radio talk shows and late night television shows to trumpet their success, how much will this inventory be worth?

Please remember, that 100 percent of our inventory is a result of a law passed by Congress in 1992. Please keep in mind the economic consequences to the plumbing industry if Congress now reverses itself and repeals the standard. And, eight years from now, what if a new Congress decides that low flow plumbing products are good public policy?

Water Conservation With 1.6 Gallon Per Flush Toilets

New York City’s toilet rebate program has had a huge impact on water use in that city. The toilet rebate program was started on March 1, 1994 and continued through November 1996. 1.1 million toilets were replaced with 1.6 gallon per flush units.

The average water use in buildings that participated in the program declined by 69 gallons per unit per day. This equates to a 29% reduction in water usage.

This savings in water usage translates into a reduction of 29% in the treatment of units to potable standard and a reduction of 29% in treating waste water for discharge into the environment.

Because they have reduced water usage, billions of dollars have not had to be invested to build additional waste and sewage treatment plants.

The availability of this water has led to a resurgence in the reconstruction industry in New York City.

SUMMARY

Now is not the time to abandon water conservation goals underlying these national standards. The technology for low consumption plumbing products has advanced dramatically since the national standard was set in 1992, and each new generation of products brings better performance.

We think this progress toward water conservation will only accelerate in the years ahead.

CTSI CORPORATION
TUSTIN, CALIFORNIA 92780
July 27, 1999

HONORABLE LADIES AND GENTLEMEN: I am writing you on behalf of a large and growing coalition who are deeply concerned about Rep. Knollenberg's proposal (H.R. 623) to repeal the Plumbing Efficiency Standards contained in the 1992 Energy Policy Act. Rep. Knollenberg has gathered numerous co-sponsors to this proposal and we feel that their cosponsorship is ill-considered for the following reasons:

- H.R. 623 has the potential of costing the U.S. over \$2 billion a year in additional water use, as well as accelerated infrastructure repairs, additions and maintenance. Over the next 20 years, it is projected that \$240 billion in capital expenditures will be necessary for wastewater infrastructure alone. Consistent nationwide efficiency measures could postpone these enormous costs for from 5-20 years. Congress, as you know, is now grappling with the problem of State Revolving Funds being insufficient to meet Clean Water Act requirements. Efficiency measures go a long way toward reducing these problems by placing less burden on older infrastructures.
- It is ironic that many of the co-sponsors to H.R. 523, come from states with tremendous water supply problems:
Texas, whose populations is projected to grow by 9 million people (45%) by 2025;
California, whose populations is projected to grow by 18 million (50%) by 2025;
Florida, whose populations is projected to grow by 6.5 million (45%) by 2025;
Georgia, whose populations is projected to grow by 3 million (38%) by 2025;
Alabama, which is projecting a 46% increase in population and is already in near crisis in terms of water supply;
Arizona, which is projecting a 53% increase in population and is in the desert;
and Washington State, which, in spite of constant rain in the winter, faces shortages every summer.

Each of these states can pass its own efficiency standards, but what of states around them that may not choose to be as responsible? States that share the same source of supply? Lawsuits would surely follow.

- The potential additional water that could be wasted by striking national efficiency standards, by our calculations, would be enough to drain the Hoover Dam in 5 years! and for what? Rep. Knollenberg quotes constituents who do not like 1.6 gpf toilets, but our company alone has distributed over 500,000 ULF toilets over the past 7 years through utility-sponsored conservation programs, and complaints are less than 1%. Manufacturers have spent millions of dollars re-engineering these efficient models, and they work better than most of the old 3.5 gpf fixtures.
- Of the 500,000 Ultra-Low Flush toilets we have distributed, a large percentage has gone into lower income neighborhoods and has saved residents countless thousands of dollars in water bills. Higher infrastructure costs will be borne by those who cannot afford to invest in savings on their own.
- Rescinding the Federal Efficiency Standards is not good for anyone. Populations are growing, but the supply of water is not.

Please carefully consider these important facts and keep the plumbing efficiency standards in place—for all of us.

Most Sincerely,

JAMES P. CRAFT
CEO